3.0 AFFECTED ENVIRONMENT AND ENVIRONMENTAL CONSEQUENCES

3.1 Introduction

Chapter 3 is organized by resource topic. Resource topics analyzed in detail include water quality and contaminants, vegetation, wildlife, aquatic resources, threatened and endangered species, recreation and access, land use, socioeconomics, environmental justice, cultural resources, Indian sacred sites, and ITAs. Geology, soils, visual quality, climate and air quality, water resources and hydrology, and topography are not discussed because early in the scoping and analysis process, no issues were identified regarding potential effects to these resources.

The affected environment is addressed first and describes the current conditions for each resource within Reclamation lands at Black Canyon Reservoir and the Montour WMA. This is not a comprehensive discussion of every resource within the RMP Study Area, but rather focuses on those aspects of the environment that were identified as issues during scoping or may be affected by the alternatives.

The potential effects of the alternatives are described next in the environmental consequences section for each resource topic. Under the alternatives subheading, the specific impacts of each of the alternatives are discussed in terms of the actions that would occur and specific information about the potential impact. Only impacts that cannot be fully avoided through the application of best management practices (BMPs), listed in Chapter 5, are described. BMPs are considered to be an integral part of the alternatives.

In the environmental consequences section, the depth of analysis of the alternatives corresponds to the scope and magnitude of the potential environmental impact. This chapter compares the effects of the two alternatives described in Chapter 2:

- Alternative A (No Action Alternative)—Continuation of Existing Management Practices
- Alternative B (Preferred Alternative)—Enhancement of Natural and Cultural Resource Values and Maintenance of Recreational Opportunities

Alternative B, the Preferred Alternative, is an Action Alternative. Alternative A, the No Action Alternative, describes the future without implementation of this RMP. Under Alternative A, lands would continue to be managed as they have been in the recent past. Some of the actions that would be formally implemented under Alternative B are currently being implemented, but on an ad hoc basis. These actions would continue to be implemented on an ad hoc basis under Alternative A, but without the benefit of a formal plan (the RMP). For the Montour WMA, Alternative A is not simply a continuation of the 1984 Management Plan because several elements of that plan were not implemented; nor would they be in the future because of conflicts with wildlife management goals and lack of a non-Federal public entity partner with whom to cost share. Impacts from the Preferred Alternative are compared to the No Action Alternative in this chapter. Mitigation measures and residual impacts remaining after implementation of mitigation measures are described for each alternative. A summary of impacts for each alternative is provided in Table 2.4-1 at the end of Chapter 2.

3.2 Water Quality and Contaminants

3.2.1 Affected Environment

The original capacity of the Black Canyon Reservoir was 44,800 acre-feet. Sediment deposition in the upper end of the reservoir has reduced the storage capacity by approximately 35 percent and contributes to a rising water table in the Montour Valley. At full pool, the volume is now 29,300 acre-feet.

The Montour WMA, which is located above Black Canyon Reservoir, is a complex of wetlands and ponds adjacent to the Payette River that cover 1.7 square miles (1,105 acres). The primary intent of the riparian areas and wetlands in the Montour WMA is to provide for food, cover, nesting, and resting habitat values for game and non-game species. The wetlands are not intended to improve water quality, although the benefits are inevitable. No wetland monitoring program to identify water quality improvements is in place. The Montour WMA will continue to be managed in compliance with its established intent; with management priorities focused on wildlife and habitat values as they relate to both game and non-game species.

Waterbodies are designated in Idaho to protect water quality for existing or designated uses. The Idaho *Water Quality Standards and Wastewater Treatment Requirements* (IDAPA 58.01.02) identifies Black Canyon Reservoir and the Payette River (from the confluence of the North Fork and South Fork Payette Rivers to Black Canyon Reservoir) as special resource waters and protects them for the following beneficial use classifications: cold water biota, salmonid spawning, primary contact recreation, and domestic water supply.

Black Canyon Reservoir is water quality limited for nutrients, oil or gas, and sediments, and is therefore on Idaho's 303(d) list (IDEQ 1998). Reclamation analyzed water quality samples on the north side of the spillway on Black Canyon Reservoir and below Squaw Creek in June 1997 and June 2000.

The Idaho Department of Environmental Quality (IDEQ) is in the preliminary stages of developing load assessments for sections of the Payette River above Black Canyon Reservoir. Preliminary load assessments are anticipated by the end of 2003. The establishment of Total Maximum Daily Flows (TMDLs) for this section of the Payette River is scheduled for December 2004. From the Black Canyon Dam to the Snake River, the Payette River is 303(d) listed for nutrients, bacteria, and temperature. This is primarily because of irrigation return flows below the dam. TMDLs for sediment and bacteria on the Lower Payette River were approved by EPA in 2000 (IDEQ 2002).

Existing impacts to water quality include increased sedimentation of the reservoir and suspended sediments from shoreline erosion, oil and gasoline spills and bypassed unburned fuel from motorized boating and PWC; suspended sediments, nutrients and pesticides from agricultural wastewater; and suspended sediment runoff from lands located higher in the watershed.

3.2.2 Environmental Consequences

3.2.2.1 Alternative A (No Action Alternative)—Continuation of Existing Management Practices

Implementation of Alternative A would result in minimal adverse impacts to water quality in the near future. However, as the natural resources experience degradation from increased use over time, the impact of no current management plan would result in some adverse impacts to water quality.

Information presented in Sections 3.7 and 3.9, *Recreation* and *Socioeconomics*, respectively, indicates that future recreation demand in the RMP Study Area can be expected to grow at a rate similar to the population increases of Ada and Canyon Counties, (39 percent and 35 percent, respectively) over the 15-year life of the RMP. Increases of these magnitudes are expected to cause more adverse impacts to water quality because of more motorized boats and PWC on the reservoir. This is expected to result in increased shoreline erosion and more oil and gasoline spills and bypassed unburned fuel from motorized boating and PWC.

Suspended sediment entering the reservoir from lands higher in the watershed and outside of the RMP Study Area is expected to continue.

Mitigation and Residual Impacts (Alternative A)

No formal mitigation measures are proposed for Alternative A because the actions under this alternative are not anticipated to have substantial adverse impacts on water quality in the RMP Study Area. BMPs listed in Chapter 5, *Environmental Commitments*, are applicable under all alternatives. Therefore, residual impacts are the same as those discussed in detail above.

3.2.2.2 Alternative B (Preferred Alternative)—Enhancement of Natural and Cultural Resource Values and Maintenance of Recreational Opportunities

Specific actions in Alternative B that would have minor benefits to water quality throughout the RMP Study Area include improved grazing management, exclusion of livestock from riparian areas, and implementing an effective erosion control program in all construction, operations, and maintenance programs. These erosion control actions would protect the RMP Study Area for future uses by minimizing the amount of sediment deposited into the reservoir.

Specific actions in Alternative B that would impact water quality with respect to Montour WMA include using water for wetlands from natural seepage or agricultural wastewater. If agricultural wastewater return flows are used for new wetlands, water returning to the reservoir via groundwater movement would be of higher quality as wetlands provide a natural filter for wastewater. In addition, wetlands will reduce the overall quantity of wastewater return flows through evaporation and infiltration. Maintaining water quality with respect to nutrients is of special importance in the RMP Study Area because recreational activities, such as swimming and fishing, can be impaired by nutrient over-enrichment and eutrophication. Although chemical fertilizers, herbicides, and pesticides on Reclamation lands, including those leased for agricultural purposes, are currently used in a manner that does not adversely affect water quality, minimizing agricultural wastewater in the reservoir would nevertheless benefit water quality.

Specific actions in Alternative B that would contribute additional, minor adverse effects to water quality with respect to Black Canyon Reservoir include developing additional facilities to accommodate expanding day use and group-related activities and provide more fishing access to the river. Improvements or expanded facilities at Cobblestone Park and improvements at Triangle Park would increase the amount of impermeable surfaces. This would in turn increase the amount of stormwater runoff from parking lot contaminants into the reservoir. Implementation of stormwater management designs and construction and operation of BMPs would reduce this adverse effect, but would not eliminate it completely.

The impact of regional population growth on water quality degradation because of shoreline erosion discussed under Alternative A may be slightly less evident under Alternative B given that resource management plans to protect and enhance natural resources would be implemented. However, the adverse effects of more motorized boats and PWC on the reservoir would be the same as Alternative A.

Suspended sediment entering the reservoir from lands higher in the watershed and outside of the RMP Study Area is expected to continue.

Mitigation and Residual Impacts (Alternative B)

No formal mitigation measures are proposed for Alternative B because the actions under this alternative are not anticipated to have substantial adverse impacts on water quality in the RMP Study Area. BMPs listed in Chapter 5, *Environmental Commitments*, are applicable under all alternatives. Therefore, residual impacts are the same as those discussed in detail above.

3.3 Vegetation

3.3.1 Affected Environment

Vegetation and plant communities within the RMP Study Area have been modified from the original native composition by farming, construction of irrigation projects, recreation, livestock grazing, and other human uses, as well as the shallow groundwater resulting from the reservoir. Native plant communities occurring in the area include the following:

- Riparian and wetland habitat along the Payette River and its tributaries
- Small areas of upland vegetation that have not been converted into agriculture
- Natural and created wetland areas that are maintained or supported by irrigation and drainage systems and shallow groundwater levels

Vegetation species in the RMP Study Area are listed in Table 3.3-1. Details about these species and their role and occurrence in the RMP Study Area are provided in Section 3.3.1.1, *Cover Type*. Potential vegetation management issues for sensitive species are provided in Section 3.3.1.2, *Vegetation Management and Invasive Species*.

TABLE 3.3-1
Occurrence of Vegetation Species in the RMP Study Area

Cover Type and Location	Common Name	Scientific Name	Native	Non-Native	Noxious Weed
Riparian Vegetation—Payette River, Tributaries, and Black Canyon Reservoir Shoreline					
	black cottonwood	*Populus trichocarpa*	X		
	black locust	*Robinia pseudoacacia*		X	
	false indigo	*Amorpha fruiticosa*		X	
	Douglas hawthorn	*Crataegus douglasii*	X		
	netleaf hackberry	*Celtis reticulata*	X		
	peachleaf willow	*Salix amygdaloides*	X		
	sandbar willow	*Salix exigua*	X		
	silver maple	*Acer saccharinum*		X	
	red-osier dogwood	*Cornus stolonifera*	X		
	rose	*Rosa* sp.	X		
Upland Vegetation					
Campgrounds					
	blackberry	*Rubus leucodermis*		X	
	black locust	*Robinia pseudoacacia*		X	
	catalpa	*Capalpa speciosa*		X	

TABLE 3.3-1
Occurrence of Vegetation Species in the RMP Study Area

Cover Type and Location	Common Name	Scientific Name	Native	Non-Native	Noxious Weed
	silver maple	*Acer saccharinum*		X	
	lawn species	Various		X	
	shade trees	Various		X	
Montour WMA					
	balsamroot	*Balsamorhiza sagitatta*	X		
	big sagebrush	*Artemisia tridentata*	X		
	bitterbrush	*Purshia tridentata*	X		
	bluebunch wheatgrass	*Agropyron spicatum/Pseudoregneria spicata*	X		
	common camas	*Camassia quamash*	X		
	downy brome	*Bromus tectorum*		X	
	rabbitbrush	*Chrysothamnus* spp.	X		
	rush skeletonweed	*Chondrilla juncea*			X
	squirreltail	*Sitanion hystrix*	X		
Wetland Species—Montour WMA					
Ponds and natural and constructed wetlands					
	blackberry	*Rubus leucodermis*		X	
	black cottonwood	*Populus trichocarpa*	X		
	blue mustard	*Chorispora tenella*		X	
	bristly foxtail	*Setaria verticillata*		X	
	bulrushes	*Scirpus* spp.	X		
	Canada thistle	*Circium arvense*			X
	cattail	*Typha latifolia*	X		
	chicory	*Chichorium intybus*		X	
	cloaked bulrush	*Scirpus pallidus*	X		
	dogfennel	*Anthemis cotula*		X	
	blue elderberry	*Sambucus cerulea*	X		
	false indigo	*Amorpha fruiticosa*		X	
	golden currant	*Ribes aureum*	X		
	hound's tongue	*Cynolgossum officinale*			X
	orchard grass	*Dactylis glomerata*		X	

TABLE 3.3-1
Occurrence of Vegetation Species in the RMP Study Area

Cover Type and Location	Common Name	Scientific Name	Native	Non-Native	Noxious Weed
	peachleaf willow	*Salix amygdaloides*	X		
	poison hemlock	*Conium maculatum*			X
	purple loosestrife	*Lythrum salicaria*			X
	reed canarygrass	*Phalaris arundinacea*		X	
	rushes (many species)	*Juncus* spp.	X		
	Russian olive	*Elaeagnus angustifolia*		X	
	sandbar willow	*Salix exigua*	X		
	sedges (many species)	*Carex* spp.	X		
	smooth brome	*Bromus inermis*		X	
	smooth scouringrush	*Equisetum laevigatum*	X		
	sowthistle	*Sonchus arvensis*		X	
	spotted knapweed	*Centaurea maculosa*			X
	teasel	*Dipsacus fullonum*		X	
Irrigation and drainage systems					
	watercress	*Rorippa nasturtium aquaticum*	X		
	speedwell	*Veronica americana*	X		
	duck weed	*Lemna* spp.	X		

Source: Compilation of available data by CH2M HILL, 2003.

3.3.1.1 Cover Types

The water level of Black Canyon Reservoir is typically maintained within 0.1 feet of full pool (2497.5 feet) during the irrigation season to ensure full diversion capability. The irrigation season coincides with the growing season for riparian vegetation and the constant full pool has resulted in a fairly consistent band of riparian vegetation along much of the reservoir shoreline. Many species that occur for the Payette River also occur along the reservoir. The dominant riparian species growing along the reservoir shoreline is the exotic false indigo. This species is quite aggressive and in many areas has completely displaced native willows and other native species along the reservoir shoreline. Riparian habitat along the Payette River and its tributaries and islands is dominated by black cottonwood and the non-native black locust and silver maple. False indigo also occurs as an understory species at many locations with black locust. Some areas still have healthy stands of native species. Netleaf hackberry, peachleaf willow and sandbar willow, Douglas hawthorn, red-osier dogwood, and rose are the dominant native shrubs along the river. Vegetation in campgrounds is composed of non-native lawn species and shade trees. Tree species, such as silver maple, black locust, and catalpa, are typical. These trees are often very

large and offer some structural habitat for bird species within the campgrounds. Non-native blackberries are the dominant shrub along the margins of several campgrounds.

Vegetation on the Montour WMA is highly variable depending on past and present land uses, depth to groundwater, and the development of wetlands for waterfowl and other wildlife. The WMA is located on the floodplain of the Payette River and has always been subject to flooding during years of high spring runoff. The Montour WMA was settled and farmed prior to construction of Black Canyon Dam. Construction of the dam resulted in a gradual rise in elevation of yearly and major floods and exacerbated the flooding problem and raised the ground water level under the area.

Some areas of the Montour WMA are farmed in cooperative agreements with local farmers who leave a portion of their crop to provide food for wildlife, especially pheasants and quail (also see Section 3.8, *Land Use*). The rest of the area is managed to provide breeding habitat and permanent winter cover for a variety of wildlife species. The shallow groundwater supports wetland species in many areas. These include native species, such as black cottonwood, sandbar willow, peachleaf willow, smooth scouring rush, and cloaked bulrush, but large areas that have been invaded by reed canarygrass. IDFG, in cooperation with Reclamation, has constructed approximately 47.7 acres of ponds. These wetlands and other wet areas, such as ditches, have cattails, bulrushes and sedges. Noxious weeds, especially purple loosestrife are a problem in these areas because of the presence of surface water.

Montour WMA has some areas where native species, such as elderberry, golden currant, black cottonwood, Douglas hawthorn, dogwood, and willows are thriving, but much of this area is dominated by exotics. Some of these non-native species, such as apple trees, black locust, Russian olive, orchard grass, and smooth brome were probably originally planted and have spread. Others, such as Canada thistle, spotted knapweed, hound's tongue, poison hemlock, rush skeletonweed, teasel, blue mustard, chicory, purple loosestrife, and sowthistle are invaders that are able to spread rapidly. Other invaders that have already become established are reed canarygrass, false indigo, bristly foxtail, downy brome, and dogfennel.

Several species of plants are found mainly along the irrigation and drainage systems, including watercress, speedwell, and duck weed. Upland native vegetation is dominated by big sagebrush, bitterbrush, and rabbitbrush. Upland understory species include bluebunch wheatgrass, squirreltail, and balsamroot. In many areas, especially along roadways, upland areas have been invaded by downy brome and rush skeletonweed.

3.3.1.2 Vegetation Management and Invasive Weeds

Vegetation management issues of concern include the spread of invasive and noxious weeds, the maintenance and enhancement of plant species diversity and quality wildlife habitats, and the protection of sensitive plant species of concern.

The most crucial vegetation management issue is weed suppression. Noxious and other invasive weeds can reduce species diversity both in the plant communities where they invade and in the wildlife species using those communities. Weed treatment issues are particularly challenging on the WMA because of the abundance of water in the area. Herbicide use near water, or in areas where the water table is high and groundwater could be contaminated, is severely restricted and

prohibited for some herbicides. However, herbicides have been the primary method of weed control. Other options, such as mechanical or biological controls, must be used to enhance water-approved herbicides.

Noxious weeds that have been found at Montour and Black Canyon are shown in Table 3.3-2. The highest priority for weed control is to prevent the establishment of new species. Small infestations of weeds such as leafy spurge, spotted knapweed, and whitetop have been successfully controlled or eradicated. Canada thistle and poison hemlock, which thrive in the moist soil conditions at Montour, are the most widespread species. Long term efforts to control these species are beginning to show moderate success, although complete eradication will be a major long-term effort if even feasible.

Recently Eurasian watermilfoil has been found in the three constructed ponds at Montour and is spreading rapidly. This highly invasive aquatic weed has the potential to completely dominate open water areas if left unchecked, and there is much concern of it spreading to the downstream watershed. Chemical control of this weed began in the summer of 2003 and will continue in 2004.

Reclamation has funded Gem County Weed Control through financial assistance agreements to control noxious weeds at Montour and Black Canyon Reservoir for several years. Annual funding has ranged from approximately $3,000 to $10,000 and has increased in recent years. The RMP study area is also within the Upper Payette Cooperative Weed Management Area (CWMA). This organization consists of three county weed control agencies, several state and Federal agencies and private landowners who are working cooperatively to control noxious weeds throughout the upper Payette River watershed. These participating agencies and individuals have provided financial and in-kind assistance for weed control at Montour through donated labor and equipment.

TABLE 3.3-2
Noxious Weeds Found within the RMP Study Area

Common Name	Scientific Name
Canada thistle	*Cirsium arvense*
poison hemlock	*Conium maculatum*
purple loosestrife	*Lythrum salicaria*
spotted knapweed	*Centaurea maculosa*
rush skeletonweed	*Chondrilla juncea*
leafy spurge	*Euphorbia esula*
hoary cress (whitetop)	*Cardaria draba*
Scotch thistle	*Onopordum acanthium*
perennial pepperweed	*Lepidium latifolium*
puncturevine	*Tribulus terrestris*
Eurasian watermilfoil	*Myriophyllum spicatum*
Purple loosestrife	*Lythrum salicaria*

Source: Gem County Weed Control
Judy Ferguson, CH2M HILL, observation in field.

3.3.1.3 Species of Concern

Rare Species

Idaho lists five plant species of concern for Gem County (see Table 3.3-3). These are discussed in the following text along with habitat requirements.

TABLE 3.3-3
Gem County Species of Concern

Common Name	Scientific Name	Global Rank State Rank
Aase's onion	*Allium aaseae*	G3 S3
Tolmie's onion	*Allium tolmiei* var. *persimile*	G4 S3
Cusick's camas	*Camassia cusickii*	G4 S2
shining flatsedge	*Cyperus rivulairs*	G5 S2
slickspot peppergrass	*Lepidium papilliferum*	G2 S2

G = Global rank indicator; denotes rank based on range-wide status
S = State rank indicator; denotes rank based on status within Idaho.
1 = Critically imperiled because of extreme rarity or because some factor of its biology makes it especially vulnerable to extinction (typically 5 or fewer occurrences)
2 = Imperiled because of rarity or because other factors demonstrably make it very vulnerable to extinction (typically 6 to 20 occurrences)
3 = Rare or uncommon but not imperiled (typically 21 to100 occurrences)
4 = Not rare and apparently secure, but with cause for long-term concern (usually more than 100 occurrences)
5 = Demonstrably widespread, abundant, and secure
U = Unrankable
Q = Indicates uncertainty about taxonomic status

Source: Idaho CDC, http://www2.state.id.us/fishgame/info/cdc/cdc.htm

Aase's Onion

Aase's onion is endemic to southwestern Idaho, where it is restricted to the lower foothills between Boise and Emmett, plus two disjunct populations near Weiser (Mancuso 1995). Aase's onion is restricted to a narrow set of habitat conditions consisting of open, relatively barren, xeric, sandy slopes that range from gentle to very steep. Aspects are usually southerly. This onion is primarily associated with sparsely vegetated bitterbrush or bitterbrush/sagebrush communities.

Two main factors contribute to the serious conservation concern for this onion. One factor is that it has a very limited distribution and restricted habitat. The other is that it is located adjacent to a major population center. Both of these cause concern and subject this species to numerous threats (Moseley and Caicco 1989). Potential habitat for this onion within the Montour and Black Canyon Study Area would be in bitterbrush or sagebrush-bitterbrush upland habitat with sandy soils.

Tolmie's Onion

Tolmie's Onion is found on dry, open ground. It usually occurs on rocky, gravelly, or clay soils. It arises from oval bulbs, which are often clustered. Tolmie's onion is found from southeastern Washington and western Idaho to northeastern California. This variety of Tolmie's onion is a narrow endemic which is found mainly in Adams County, Idaho, in the southern Seven Devils Mountains. There are a few disjunct populations in Gem and Washington Counties on USFS land (Moseley and Mancuso 1990). Potential habitat for Tolmie's onion would be in upland habitat.

Cusick's Camas

This lily occurs on steep, moist slopes and terraces that are spring fed or have slow moving water. It is larger and more robust than common camas and generally has lighter blue flowers. Its distribution includes the Snake River canyon area and tributaries in Adams, Gem and Washington Counties. It also occurs in Baker County, Oregon, and close to the southern rim of Hell's Canyon near McGraw Lookout. This camas is most likely to occur in moist to wet meadow habitat on steep slopes or terraces and in lowland sites along water (Atwood and DeBolt 2001).

Shining Flatsedge

This annual member of the sedge family is a rare obligate wetland plant in the Northwest. It occurs most often in wetlands across the eastern U.S. When it does occur, it is often in wet areas at lower elevations. Jankovsky-Jones (2001) identified this flatsedge on the Montour WMA.

Slickspot Peppergrass

Habitat for slickspot peppergrass consists of openings in sagebrush stands that are protected from wind, but not from sun. The surrounding sagebrush-shrub communities are generally on well-drained soil, but the microsites (openings) in which slickspot peppergrass occur are much higher in clay than the surrounding sites. This species is restricted to "slickspots" with a clay layer that is able to hold water. These small-scale habitat microsites range in size from less than one square meter to approximately 10 square meters (Mancuso and Moseley 1998).

The main distribution range of slickspot peppergrass is the western Snake River Plain and adjacent northern foothills in Payette, Gem, Canyon, Ada, and Elmore counties in Idaho. It occurs in semiarid, sagebrush-steppe ecosystems in this region of southern Idaho on the volcanic plains of both the Snake River Plain and Owyhee Plateau and in adjacent foothills. All occurrences of slickspot peppergrass are on or adjacent to volcanic plateaus underlain by basalt or rhyolite (Moseley 1994).

Reclamation-administered land surrounding Black Canyon Reservoir and Montour Wildlife Management Area contains a relatively narrow fringe of sagebrush-steppe habitat and most of these areas are on relatively steep slopes which are generally poorly suited for slickspot peppergrass. While no specific surveys have been conducted, it is unlikely that slickspot peppergrass occurs within the RMP study area.

Designated Critical Habitat

No designated critical habitats for rare and sensitive plant species occur within the RMP Study Area. One such species, shining flatsedge, is known to occur on the Montour WMA (Jankovsky-Jones 2001). Cusick's camas populations occur on steep moist slopes in this area of Gem County. Such areas are unlikely to occur within the RMP Study Area. No other rare plant species are known to occur within the project area, and none were noted within the project area during limited-scope field visits. However, most of the plant species of concern listed in Section 3.3.1.3 are known to inhabit similar settings to native upland, riparian, and wet meadow habitats within the RMP Study Area.

Rare Plant Communities

The Idaho CDC conducted a study in 2001 to identify rare wetland plant associations with the western Snake River and its major tributaries, including the Payette River (Jankovsky-Jones 2001). Plant associations represent repeating assemblages of plant species that occur in response to complex environmental factors. Table 3.3-4 presents the rare plant community occurrences identified at the Montour WMA.

TABLE 3.3-4
Montour Wildlife Management Area Rare Plant Communities

Community Type and Scientific Name	Common Name and Description	Global Rank*	State Rank*
Salix exigua/barren	coyote willow/barren	G5	S4
Distichlis stricta	interior saltgrass (at least 25% cover of this species)	G5	S4
Carex lanuginosa	woolly sedge (this is the dominant species with > 25% cover)	G3	S2
Carex nebrascensis	Nebraska sedge (this is the dominant species with > 25% cover)	G4	S3
Carex praegracilis	clustered field sedge (this species alone or with other graminoids > 25% cover)	G2, G3, Q	S2
Eleocharis palustris	creeping spikerush (this is the dominant species with > 25% cover)	G5	S3
Juncus balticus	baltic rush (this is the dominant species with > 25% cover)	G5	S5
Typha latifolia	common cattail (this species alone or with *T. angustifolia* with > 50% cover)	G5	S4
Scirpus validus	softstem bulrush (this is the dominant species with > 25% cover)	G4	S2
Populus trichocarpa/rosa woodsii	black cottonwood/wood's rose (> 25% cover of rose)	G4	S3
Salix lasiandra/mesic forb	whiplash willow/mesic forb (mesic forbs include *Euthamia occidentalis*, *Urtica dioica, Verbena hastata, Lycopus asper, Smilacina stellata*, and others)	G?	S2

TABLE 3.3-4
Montour Wildlife Management Area Rare Plant Communities

Community Type and Scientific Name	Common Name and Description	Global Rank*	State Rank*
Eleocharis rostellata	wandering spikerush (this is the dominant species with > 25% cover)	G2	S2
Juncus effusus	common rush (this is the dominant species with > 25% cover)	GU	SU

Source: Jankovsky-Jones 2001
*See Table 3.3-3 for explanation of global and state rank

3.3.2 Environmental Consequences

3.3.2.1 Alternative A (No Action Alternative)—Continuation of Existing Management Practices

A major adverse affect on vegetation is likely to result from expected increases in human activity and use within the RMP Study Area. Currently, approximately two-thirds of all visitors to Black Canyon Park are from Ada and Canyon Counties. Population forecasts for these two counties anticipate population increases of 39 percent and 35 percent, respectively, by the year 2015 (Sections 3.7 and 3.9, *Recreation* and *Socioeconomics*). These increases are expected to translate into comparable increases in recreational use of the RMP Study Area under both alternatives.

Direct adverse affects from such sizeable increases in human use would substantially impact vegetation within the RMP Study Area. Potential direct affects include vegetation removal for construction projects designed to increase safe access or to enlarge recreational areas. Other direct affects include increased pedestrian use for a variety of activities, which both damages or kills vegetation and intensifies the translocation of weed seeds around the RMP via clothing, boots, or pets.

Indirect adverse affects from increased human use would be equally detrimental over the long run. Increased levels of human activity, such as walking overland, would increase soil compaction. Soil compaction is detrimental to vegetation because it decreases precipitation infiltration into the soil for plant root uptake and, at the same time, increases precipitation runoff. This increases erosion potential and sediment loads. Compact soils also inhibit natural seed regeneration so that native vegetation is not able to adequately replace itself.

Development and implementation of an IPM Plan and better cooperation among all parties may result in improved management and control efforts directed toward noxious and invasive terrestrial and aquatic weeds compared to current efforts. This is in the face of increasing expansion of noxious weeds, which continue to replace native vegetation. Depending on funding levels, this could have one of the following two effects. A better control program without an increase in funding may hold the line by preventing new infestations and controlling the size of existing infestations. This level of effort may be able to maintain the status quo in terms of future weed infestation and wildlife habitat degradation. A second possibility is that additional funding, combined with the IPM, could begin to control problem weeds and reverse the degradation of

native vegetation by halting weed invasions that are occurring throughout the RMP Study Area. It is not known at this time which of these two paths would be followed under Alternative A.

A proposed Reclamation-wide application system for special events could be used as a tool to determine the areas that receive the highest and most frequent impacts from human use. If permits are granted, some vegetation damage could result from high impact human use during special events. Special events held at the WMA are likely to result in vegetation trampling and the introduction and spread of noxious weeds.

Additional wetlands and ponds would be developed as funding becomes available at Montour WMA. If these are designed for areas that are currently inhabited by exotic species or have bare ground, and if these ponds succeed in increasing native plant diversity, cover, and multiple plant structural levels by replacing areas that currently are weed infested, lack vegetation, or are dominated by reed canarygrass or false indigo, then wetland development would benefit the Montour WMA because they will increase waterfowl and amphibian habitat. If these wetlands are developed in areas that currently have high quality native upland vegetation, populations of sensitive species, productive wetland areas for wildlife, or viable native vegetation as listed in Section 3.3.1.3, wetland and pond developments would have detrimental impacts to vegetation values.

Livestock grazing pressure at Montour WMA is expected to occur at the current rate under this alternative. Although the level of grazing impacts has been reduced in the last few years, some ongoing impact to riparian and wetland vegetation would continue. Livestock grazing pressure, when coupled with the expected increases in human activity, would likely cause further declines in native forb and grass species and may exacerbate the spread of weeds within the WMA.

Under either Alternative A (No Action) or Alternative B (Preferred Alternative) little or no disturbance to sagebrush-steppe vegetation is likely to occur. The sagebrush areas are not areas of high human use and increased visitor use is unlikely to adversely affect sagebrush habitats. Expansion of Black Canyon Park may remove a very small portion of heavily disturbed sagebrush vegetation not suitable for slickspot peppergrass.

Given the low probability that slickspot peppergrass occurs in sagebrush-steppe habitats within the RMP study area, and the lack of impacts to sagebrush-steppe vegetation, under either management alternative, Reclamation has determined that implementation of either Alternative A (No Action) or Alternative B (Preferred Alternative) would not impact slickspot peppergrass.

Mitigation and Residual Impacts (Alternative A)

Reclamation would survey for the presence of microsites for slickspot peppergrass prior to conducting any project that would impact shrub-steppe vegetation. BMPs listed in Chapter 5, *Environmental Commitments*, are applicable under all alternatives. Reclamation will proportionally replace areas and habitat value of all wetland and riparian areas that are directly impacted or degraded by implementation actions. The implementation and adherence to these BMPs make it possible to avoid additional formal mitigation measures for Alternative A because the other actions under this alternative are not anticipated to have substantial adverse impacts on

vegetation resources in the RMP Study Area. Therefore, residual impacts are the same as those discussed in detail above.

3.3.2.2 Alternative B (Preferred Alternative)—Enhancement of Natural and Cultural Resource Values and Maintenance of Recreational Opportunities

Although both alternatives would develop and implement an IPM Plan, including addressing invasive aquatic plants, under Alternative B additional funding would be sought and weed control would be raised to a higher priority. If more extensive weed control occurs under this alternative, it would result in positive vegetation management for the RMP Study Area. Implementation of weed control would be planned to avoid negative impacts to native vegetation. Weed management treatment methods would be selected that would preserve native species remaining onsite to the greatest extent possible. For sites wholly occupied by weeds, once weed treatment has successfully removed weeds on the area, the site would be replanted with native vegetation in coordination with IDFG, with non-native species used as appropriate to successfully compete with the exotic species and to meet WMA habitat goals. If native species are used, the seed mixture would include both early and late successional species. All species would be acclimated to Gem County so they have the best potential to hold the area against further invasion. These measures would have positive benefits for the RMP Study Area by controlling the spread of weeds and by restoring low value weed-infested areas back to higher value habitat for IDFG management species like pheasants. These actions help to control re-infestation with weeds and benefit wildlife and the watershed.

Black Canyon and Cobblestone parks would be expanded under Alternative B (assuming a public non-Federal managing partner is found to share costs). Additions to these parks would likely include removing native and exotic riparian and upland vegetation now found on those sites. Such removal or damage to native vegetation would have detrimental impacts to vegetation resources, depending on the species present.

Special events that are incompatible with wildlife management goals and objectives would no longer be held on the Montour WMA under this alternative. This change would reduce damage to vegetation within the WMA from trampling and camping and would reduce the potential for weed introduction and spread caused by these activities, thus having a beneficial effect on vegetation resources.

Under this alternative, an additional 25 to 50 acres of ponds and wetlands would be developed at the Montour WMA. This type of development would be similar to what is planned under Alternative A, except that sensitive plants species and wetland communities would be avoided by conducting a field review when developing plans for additional wetland areas and ponds. Additionally, under this alternative, all ponds within the Montour WMA would be monitored and maintained so that invasive plants, such as Eurasian watermilfoil, would more likely be controlled. Because sensitive species and plant communities would be avoided and invasive weeds controlled, wetland and pond development would have fewer potential adverse effects on native vegetation than under Alternative A. They could still be detrimental if placed in high quality uplands or wetland communities with native wetland plants. These ponds/wetlands would have the greatest benefit to vegetation and least damage to native vegetation if they are placed on agriculture land, weed infested sites, or disturbed areas.

In coordination with IDFG, grazing leases on the Montour WMA would be evaluated under this alternative as they come up for renewal. If it is deemed necessary, changes in grazing management would be implemented to comply with WMA goals and objectives and to protect wetland and riparian communities. If carefully implemented and monitored, grazing management changes that are consistent with WMA goals are likely to benefit native vegetation.

Mitigation and Residual Impacts (Alternative B)

Substantial detrimental impacts to native plant resources would be avoided by undertaking the following design measures:

- Reclamation will proportionally replace areas and habitat value of all wetland and riparian areas that are directly impacted or degraded by implementation actions.
- The expansion proposed for Black Canyon Park is along a riparian edge of the reservoir. If the expansion removed false indigo and other weedy species that are invading along the riparian zone and leave native vegetation in place, this expansion would not be as unfavorable to current vegetative resources.
- The expansion proposed for Cobblestone Park is a gravel substrate within the floodplain of the Payette River. This site has an open understory that makes it a target for heavy off-road vehicle use. Although much of it has been invaded by weeds, many areas have native cottonwood and willow. If the proposed expansion for Cobblestone Park were designed to conserve the trees and shrubs onsite, to control weeds, and to limit vehicle use to roadways, the expansion would avoid considerable detrimental impacts to native vegetation.
- Both expansions could further compensate for impacts to vegetation resources if the expanded and disturbed areas were landscaped with native plants instead of with the mix of exotic lawn and tree species that were used for the existing parks.

Residual impacts would be the same as described above.

3.4 Wildlife

3.4.1 Affected Environment

Portions of this affected environment discussion are taken from the 1984 Montour Wildlife/Recreation Area Management Plan (Reclamation 1984), when that information still represented current conditions. This information was supplemented by site visits and personal observations by biologists and discussions with Reclamation and IDFG biologists.

The Payette River Wildlife Management Plan (IDFG undated) provides a list of wildlife species known to occur on the Payette River WMA during one or more seasons of the year. Given its proximity to Black Canyon Reservoir and the Montour area, and the similarity of habitats present at the two areas, these same species would be expected to occur in the RMP Study Area. The list includes 198 species of birds, 60 mammals, 16 reptiles, and 7 amphibians.

Specific elements of the RMP related to habitat development and management at Montour will serve as the WMA Management Plan for Reclamation and IDFG. Specific goals are expected to be similar to those of the Payette River Wildlife Management Plan that covers lands and islands along the Payette River below Emmett, Idaho. The overall mission statement reads as follows: "The mission of the Payette River WMA is to provide sustained and enhanced wildlife populations and habitat, especially for waterfowl and upland game birds, and to provide the public with a variety of wildlife-oriented outdoor recreational opportunities."

Wildlife use forested and scrub/shrub riparian communities disproportionately more than any other habitat (Thomas 1979). Thomas reported that 285 of 378 terrestrial species known to occur in the Blue Mountains of northeastern Oregon are either directly dependent on riparian zones or use them more than other habitats. Riparian habitats within the Black Canyon/Montour RMP area are also extremely valuable for wildlife, including neo-tropical migrant birds, raptors, upland game birds, waterfowl, furbearers, mule and whitetail deer, small mammals, and amphibians.

Wildlife present in the RMP Study Area include 13 mammalian predators and fur bearers including river otters in the Payette River. The Payette River WMA Management Plan indicates that 10 species of bats occur in that area. All would be expected to occur in the RMP Study Area. Several of these are considered to be sensitive species by the BLM, and are noted later in this section. The Payette River WMA Management Plan lists 17 species of eagles and hawks and 8 species of owls in the area. Thirty-five species of waterfowl, wading birds, shore birds, and other water-related species have been reported, along with 8 woodpecker species. More than 100 species of migratory songbirds are listed as being present in the Payette River WMA area (IDFG undated). Of particular concern is the presence of introduced bullfrogs (*Rana catesbeiana*) because of their ability to eliminate native amphibians, which are suffering population declines on a global scale (Kiesecker et al 2001). IDFG has indicated that bullfrogs are present in the wetlands at Montour.

Executive Order 13186 defines the responsibilities of Federal agencies to protect migratory birds under the four Migratory Bird Treaties (MBT Conventions) to which the United States is a

signatory. Most birds in North America are considered migratory under one or more of the MBT Conventions. The Executive Order mandates that all Federal agencies cooperate with the U.S. Fish and Wildlife Service (FWS) to increase awareness and protection of the nation's migratory bird resources. Each agency is supposed to have developed an MOU with FWS stating how it intends to cooperate. Reclamation is in the process of finalizing an MOU with FWS, which includes provisions for analyzing Reclamation's effect on migratory birds.

Natural and man-made wetlands in the Montour WMA provide important habitat for many species of wildlife, including shore birds, waterfowl, song birds, and furbearers such as weasels and mink. The wetlands on the west end of the valley are of particular importance to waterfowl. Approximately 170 acres of open ponds and natural wetlands extend in a north-south direction between the Payette River on the west and the agricultural lands on the east. Human use in the immediate vicinity of wetlands is restricted from February 1 to July 1 to protect breeding wildlife and duck broods.

The highest number of waterfowl typically use the agricultural crop lands of Montour during spring migration. Numbers vary from year to year, but 4,000 to 5,000 ducks and geese in the Montour area at this time is not uncommon. Canada geese nest and graze on portions of the higher sites surrounding this wetland and along the Payette River. The Montour area and the nearby Payette River are major producers of Canada geese (Personal Communication, Tim Shelton, June 4, 2002). Huntable populations of ring-necked pheasants and California quail occur in the Montour area. Recently, 1,300 to 1,400 pen-raised pheasants have been released annually from the end of October through the end of the year to meet the ever-increasing demand from hunters. Few of these pen-raised pheasants survive the winter. Food plots that are planted to support pheasants also provide food for deer and several species of small mammals and birds.

Past cattle grazing reduced much of the woody and herbaceous vegetation needed for food and residual cover by wildlife at Montour. However, most of the grazing was removed in 2000, allowing more residual herbaceous cover and permanent woody cover to remain, which improves nesting habitat for all non-game species as well as for upland game birds and waterfowl. The grazing that does remain is limited to 35 cow/calf pairs that are on the site from May until mid-September.

The sagebrush-grass community that borders the south side of the valley adds to the vegetation diversity of the area. Many species of wildlife, including mule deer and a variety of birds and mammals, inhabit this area. Mule deer winter on the southern portion of Squaw Butte and most stay north of Black Canyon Reservoir. A small number of migrants from big game units 32 and 32A would move across the Black Canyon Reservoir towards lands to the south each winter. A few deer fall though the ice and drown in the reservoir each year, but this has not been a serious problem (Personal Communication, Tim Shelton, June 4, 2002). Several mule deer are killed by vehicles each winter as they attempt to cross Highway 52, which follows the north side of the reservoir. A small resident herd of about 25 whitetail deer are also in the area. A few mountain lions would be expected in the area during the winter when deer are concentrated. The sagebrush-grass community also provides escape cover for pheasants during the fall and winter months. Habitat quality on most of the uplands has been substantially reduced by livestock grazing.

The presence of noxious and invasive weeds has degraded wildlife habitat values in heavily infested portions of wetland and riparian areas as well as on uplands. The potential for additional severe degradation of habitat value is substantial. Noxious and invasive weeds that occur in the RMP area are discussed in Section 3.3, *Vegetation*.

3.4.1.1 Sensitive Species

The **Yellow-billed cuckoo** (*Coccyzus americanus occidentalis*) is a neotropical migrant species that breeds in North America and winters primarily south of the U.S.-Mexico border.

A petition to list this species for protection under the Endangered Species Act (ESA) was filed in 1998. The petitioners stated that habitat loss, overgrazing, tamarisk invasion of riparian areas, river management, logging, and pesticides have caused declines in the numbers of yellow-billed cuckoos. The yellow-billed cuckoo was given status as a Candidate species for protection under the ESA. The Idaho CDC lists the status of the yellow-billed cuckoo in Idaho as S1 or critically imperiled. It is also a BLM sensitive species.

Cuckoos favor areas with a dense understory of willow (*Salix* spp.) combined with mature cottonwoods (*Populus* spp.), generally within 100 meters of slow or standing water. They feed on insects, mostly caterpillars, but also beetles, fall webworms, cicadas, and fruit (especially berries). Potentially suitable cuckoo habitat exists on the Montour WMA and on islands in the Payette River. The predominance of false indigo in the riparian zone along the shoreline of much of Black Canyon Reservoir probably precludes yellow-billed cuckoo use of these areas. No surveys have been conducted to determine its status in the area.

Northern goshawks (*Accipiter gentilis*) are listed as sensitive species by the USFS and BLM. Hayward and Escano (1989) studied and described northern goshawk nesting habitat in western Montana and northern Idaho.

No goshawks are known to nest in the RMP area. However, they do use forested areas along the reservoir and especially along the Payette River and at Montour during migration and winter. Forested stands provide high quality foraging and roosting habitat and the low levels of human activity during the winter would be attractive to goshawks.

The **ferruginous hawk** (*Buteo regalis*) population is declining throughout its range and this species is listed as sensitive by both the USFS and BLM. Ferruginous hawks are especially sensitive to human disturbance early in the nesting period, when disturbance often results in nest abandonment. They are found in open habitats, such as grassland, shrubsteppe, sagebrush, deserts, saltbush-greasewood shrublands, and outer edges of pinyon-pine and other forests. Ferruginous hawks are not known to nest in the vicinity of the RMP area, but might forage in the Montour area during spring or fall migration or if any pairs nest nearby.

Long-billed curlew (*Numenius americanus*) were heard at Montour by biologists during spring 2002. It is possible that this species is breeding in the Montour WMA, because they are known to breed on nearby BLM lands. Wet meadows present within the Montour WMA provide high quality foraging habitat for curlews, although curlews also forage in other habitats. This species is listed as sensitive by both the USFS and BLM and has an S3 ranking by the Idaho CDC.

The **spotted frog** (*Rana luteiventris*) population south of the Snake River is considered to be part of the Great Basin Population. This sub-population of the Columbia spotted frog is a candidate

for listing under the Endangered Species Act (Reclamation 1998). Columbia spotted frogs that may occur at Montour are not part of the Candidate Great Basin Population. However, all populations of spotted frogs are believed to be declining because of the loss and degradation of habitat, water diversion, livestock grazing, spring development for livestock, and competition with and predation by exotic species such as largemouth bass and bullfrogs (Reclamation 1998), both of which are present in Montour wetlands. General declines in Western amphibian populations have also been attributed to pathogen outbreaks linked to climate-induced changes in ultraviolet light exposure (Kiesecker et al. 2001).

The Payette River Wildlife Management Plan lists the spotted frog as one of the amphibians that occurs downstream of Black Canyon Dam. However, no field surveys have been conducted to verify this occurrence nor have surveys been conducted on the Montour WMA. The Idaho CDC does not list the spotted frog as occurring in Gem County. Its status in the RMP area is uncertain.

As noted earlier, six species of **bats** that likely occur in the RMP Study Area are considered to be sensitive by the BLM. These species and their state rank by the Idaho CDC are shown in Table 3.4-1.

TABLE 3.4-1
Species of Bats Considered Sensitive by the BLM that Likely Occur in the RMP Study Area

Common Name	Scientific Name	State Rank	Sensitive Species
Long-eared myotis	(*Myotis evotis)*	S3	BLM
Yuma myotis	(*Myotis yumanensis)*	S3	BLM
Small-footed myotis	*(Myotis ciliolabrum)*	S2	BLM
Western pipistrelle	(*Pipistrellus hesperus)*	S1	BLM
Townsend's big-eared bat	(*Corynorhinus townsendii)*	S2	BLM, USFS
Fringed Myotis	(*Myotis thysanodes)*	S3	BLM

S = State rank indicator; denotes rank based on status within Idaho.
1 = Critically imperiled because of extreme rarity or because some factor of its biology makes it especially vulnerable to extinction (typically 5 or fewer occurrences)
2 = Imperiled because of rarity or because other factors demonstrably make it very vulnerable to extinction (typically 6 to 20 occurrences)
3 = Rare or uncommon but not imperiled (typically 21 to100 occurrences)

Source: Idaho Conservation Data Center, http://www2.state.id.us/fishgame/info/cdc/cdc.htm

3.4.2 Environmental Consequences

3.4.2.1 Alternative A (No Action Alternative)—Continuation of Existing Management Practices

Disturbance of wildlife often results in initial displacement and, if the disturbance persists or is somewhat regular, ultimately lower local wildlife population levels in the affected area, especially for more sensitive species. Tolerance of various types of environmental disturbances varies among species and among individuals of the same species. The potential for impact is related to the timing and nature of the disturbance, severity of winter conditions, habitats and species present, physiological status of the animal, hunting pressure, and frequency of the disturbance.

Migratory birds would be both beneficially and aversely affected by actions under Alternative A, depending on the action and the species involved. Most of the actions would have a neutral effect on migratory birds. Changes in cover type to develop wetlands would generally have net beneficial effects on migratory birds, although some individual species would be adversely affected.

The effects of implementation of Alternative A on sensitive species are expected to be mostly neutral or positive. Recent reductions in livestock grazing that would continue under this alternative could potentially benefit several sensitive species. Higher quality riparian areas would provide better potential habitat for cuckoos and higher quality habitat for goshawk prey species. Several species of sensitive bats forage over water and may benefit from higher insect productivity in created wetlands. Long-billed curlews, a sensitive species that often nest in areas of short grass, especially near water (Erlich et al. 1988), might benefit from controlled livestock grazing of upland areas. Conversion of seasonally moist wet meadow communities to emergent wetland/open water ponds could eliminate foraging areas used by long-billed curlews and possibly spotted frogs. Mitigation measures presented at the end of this section would avoid potential impacts on spotted frogs resulting from conversion of wet meadow to emergent wetland/open water pond habitat.

Development and implementation of an IPM Plan and better cooperation between all parties may be expected to result in improved management and control efforts directed toward noxious and invasive terrestrial and aquatic weeds compared to current efforts. This action may partially offset an increasing noxious weed problem, which continues to degrade wildlife habitat quantity and quality. The results of this program depends on funding levels, as described in Section 3.3, *Vegetation*. Future funding levels under Alternative A are not known at this time. It is assumed that revegetation with native species or at least with species that are favorable for wildlife will be an integral part of the IPM. This would have long term benefits for wildlife, which would vary depending on the plant species that are used.

Continued use of the WMA for special events that are incompatible with wildlife management goals and objectives would be detrimental for wildlife and habitat.

Information presented in Sections 3.7 and 3.9, *Recreation* and *Socioeconomics*, respectively, indicates that future recreation demand in the RMP Study Area can be expected to grow at a rate similar to the population increases of Ada and Canyon counties (39 percent and 35 percent, respectively), over the 15-year life of the RMP. Increases of these magnitudes are expected to cause more disturbance of wildlife, including migratory birds, resulting on lower populations in areas used by recreationists. It is also likely that some direct habitat degradation would occur because of higher levels of use and associated vegetation trampling, which would degrade wildlife habitat value. More visitors would increase the likelihood that more noxious weeds would be introduced and become established, which would also degrade wildlife habitat values. Deer regularly die during the winter along State Highway 52 (SH-52) after being struck by vehicles. An increase in the local human population of the area around the RMP Study Area would result in more traffic on SH-52 and more vehicle deer collisions.

Under Alternative A, additional wetlands and ponds would be developed as funds become available, but there would be no formal plan or goal for development. It is likely that fewer acres

of wetlands would be developed than under Alternative B, resulting in fewer acres of new wetland habitat and lower gains for target management species and fewer potential losses for other species because of changes in habitat types. Any conversion from one type of habitat to another involves gains for species that prefer the new habitat and losses for those that used the replaced habitat. Based on the wetlands that have been developed in the past, new wetlands would likely consist of a fairly high percentage of open water with emergent herbaceous and shrub wetland and riparian vegetation on islands and the shoreline. This type of wetland favors waterfowl and other species that prefer this mix of open water and shoreline habitats including species that nest or forage in tall herbaceous and shrub-dominated wetlands such as red-winged blackbirds (*Agelaius phoeniceus*), song sparrows (*Melospiza melodia*), and yellow warblers (*Dendroica petechia*). The specific location of new wetlands is not known. If they are constructed in upland areas that have been farmed, fewer, and certainly more common, wildlife species would be adversely affected by the change in cover types. If new wetlands were to be constructed in low lying areas that support seasonally moist wet meadow communities, a variety of migratory and nesting shorebirds such as common snipe (*Galliagno galliagno*), American avocet (*Recurvirostra americana*), and others would be adversely affected because of small declines in available wet meadow habitat. Reclamation will maintain new and existing wetlands and ponds and the area in and around them within an IPM plan.

Bull frogs, an exotic species, would also be expected to quickly occupy new wetlands on their own. Native amphibians would also occupy these new wetlands over time. However, the presence of bass and bull frogs would substantially reduce the potential habitat value of the new wetlands for native amphibians compared to the potential habitat value if these predators were not present.

Livestock grazing would continue as in the recent past under Alternative A, which is occurring at levels that have been reduced in the last few years. Only a very few wildlife species that prefer short pasture grasses at some times of the year benefit from livestock grazing. These include Canada geese (*Branta canadensis*), which feed on short grasses; killdeer (*Charadrius vociferous*), which nest in areas with sparse vegetation; and perhaps long-billed curlew (*Numenius americana*), a sensitive species that often nests in areas of short grass, especially near water (Erlich et al. 1988). Livestock grazing is used in some areas of the WMA to maintain short grass for foraging Canada geese. Most wildlife habitat is adversely affected by livestock grazing because of reduced plant species diversity, loss of permanent cover, lack of a herbaceous vegetation layer, reduced survival and recruitment of young riparian plants, and competition for forage with some species (Saab et al. 1995). The recent reductions in livestock grazing levels have allowed some recovery in riparian vegetation on the WMA (Personal Communication, Tim Shelton, June 4, 2002).

Agricultural leases would also continue as in the past. These leases generally involve allowing farming on a parcel in exchange for the farmer leaving a small unharvested food plot or assisting in the establishment of permanent cover on formerly farmed lands. These actions are generally intended to improve nesting habitat and provide food for upland game birds, although other wildlife species also benefit from these actions. Seed availability and cost usually dictate the use of non-native species when permanent cover is being established, which reduces potential benefits to a narrower range of wildlife species than if a mix of local native grasses, forbs, and shrubs were planted. The application of herbicides and pesticides on lands leased for agriculture

is regulated by Reclamation to reduce or minimize impacts on wildlife to the greatest extent possible consistent with required farming practices.

Ongoing activities on the WMA that would continue to promote the growth of permanent cover would benefit a variety of wildlife species that require dense vegetation for nesting, escape cover, or foraging. Maintenance of existing wetlands would also benefit a wide range of wildlife species, especially if the success of weed control efforts increases following development and implementation of the IPM Plan.

RMP-related activities associated with recreation sites adjacent to Black Canyon Reservoir that would continue under Alternative A would not cause any additional impacts on wildlife or habitat, including sensitive species. However, as discussed above, expected increases in human use of these sites would have adverse impacts on wildlife.

Mitigation and Residual Impacts (Alternative A)

Where possible new wetlands/open water ponds would be developed in upland areas at Montour WMA. However, new wetlands could also be developed within wet meadows if water sources are more appropriate. No ground disturbing activities shall be undertaken before a field review is conducted to determine the likelihood of occurrence of sensitive species (e.g. spotted frog). If warranted a sensitive species survey would be conducted following established protocols and seasonal requirements. Project implementation and design would be based on the findings of the survey. Where it is possible to place new wetlands in existing uplands, this action would avoid impacts on wildlife that use wet meadows, which is also a valuable habitat type.

Additional wildlife species are likely to become rare over the 15-year time frame of the RMP. Appropriate site clearances following established protocols would also be conducted prior to ground disturbance for other wildlife species that become rare during that period.

3.4.2.2 Alternative B (Preferred Alternative)—Enhancement of Natural and Cultural Resource Values and Maintenance of Recreational Opportunities

The potential adverse effects of implementation of Alternative B on sensitive species are expected to be either the same or less than those described for Alternative A. As in Alternative A, conversion of seasonally moist wet meadow communities to emergent wetland/open water ponds could eliminate foraging areas used by long-billed curlews. The existing MOU between Reclamation and IDFG for managing the WMA would be updated as part of Alternative B. RMP goals related to sensitive species would become part of that MOU, resulting in better protection for and avoidance of impacts to sensitive species.

Development and implementation of an IPM Plan as in Alternative A, combined with a higher priority for weed control under Alternative B, may result in improved management and control efforts directed toward noxious and invasive terrestrial and aquatic weeds compared to Alternative A. Potential additional funding and a higher priority compared to Alternative A would be expected to result in greater success in controlling problem weeds and reversing the general decline in wildlife habitat values compared to Alternative A. As under Alternative A, it is assumed that revegetation with native species or at least with species that are favorable for

wildlife will be an integral part of the IPM Plan. This would have long term benefits for wildlife, which would vary depending on the plant species that are used.

Moving special events primarily to Triangle Park rather than permitting them at Montour unless they are compatible with wildlife management goals and objectives would avoid potential impacts to sensitive and other wildlife species because these species are more likely to occur at the WMA.

Impacts on wildlife that would result from a projected 35 to 39 percent increase in human use of the RMP Study Area over the next 15 years would be the same as described for Alternative A.

Under Alternative B, the WMA boundary would be extended to the west along the south shore of the reservoir to a point opposite the mouth of Squaw Creek. This area has been leased for grazing in the past and current wildlife habitat values are limited. The area does not have a water right, so as funds become available, permanent upland cover would be developed on this area, which would benefit a variety of bird and mammal species. Benefits would accrue for the widest range of species if the future vegetation includes native grasses, forbs, and shrubs.

Twenty-five to 50 acres of additional wetlands and ponds would be developed under Alternative B. The types of beneficial and adverse impacts and the species that would benefit and those that would be adversely affected by this change in cover type would be similar to Alternative A. Compared to Alternative A, additional effort would be placed on controlling weeds and water level fluctuations in wetlands, which would benefit many species of wildlife. Additional efforts would also be placed on avoiding sensitive plant communities, which would benefit associated wildlife species. The problem of introduced aquatic predators preying on native amphibians would be the same as described for Alternative A. Reclamation will maintain new and existing wetlands and ponds and the area in and around them within an IPM plan.

Livestock grazing and agricultural leases would continue under Alternative B but these leases would be reviewed as they expire for conflicts with the management goals of the WMA. New conditions would be added to the leases so that they are consistent with WMA management goals. Potential adverse effects from livestock grazing and agricultural leases would be lower than under Alternative A because of this consistency review and new lease conditions. Also, there would be greater emphasis on eliminating grazing in seasonal wet meadow and riparian areas so that wildlife habitat values could improve, which would benefit many species including numerous migratory birds. Better residual cover in wet meadows, resulting from reduced grazing levels, would benefit long-billed curlews and, if present, spotted frogs. However, even relatively light levels of livestock grazing in wet meadow areas could adversely affect curlews and spotted frogs because of vegetation removal, trampling, and water quality degradation.

Several features of Alternative B would increase non-consumptive recreation opportunities on the WMA and others would foster the dissemination of information about wildlife and wildlife habitat to the public. These actions have mixed effects on wildlife and habitat. More human use of an area like the Montour WMA is generally considered to have adverse affects on wildlife and habitat because of greater levels of wildlife disturbance, vegetation trampling, and weed introduction and spread. Some of these adverse affects of disturbance in parts of the WMA would be partially offset by the extension of the seasonal access closure around wetlands to

protect nesting birds and broods. This closure begins on February 1 and under Alternative B it would be extended to July 31 instead of the current July 1 ending, which would be consistent with the IDFG seasonal closure policy at other WMAs. Increased human use, combined with increased availability of information about wildlife and habitat programs at the WMA, can foster a greater appreciation of actions being undertaken on behalf of wildlife, which can benefit both wildlife and habitat at the WMA. Greater emphasis would be placed on natural resource educational materials and activities under Alternative B, which would benefit wildlife in the long term.

Compared to Alternative A, several management activities on the WMA that would be implemented under Alternative B would promote more growth and maintenance of permanent upland and wetland cover in a variety of locations including along ditches. This would benefit many wildlife species that require dense vegetation near the ground for nesting, escape cover, or foraging. Species such as hawks, owls, and mink that prey on small mammals would benefit indirectly from an improved prey base. Improved water control at existing wetlands to reduce water level fluctuations, would reduce flooding of shoreline nests.

Development of new and expansion of existing facilities at several of the parks around the reservoir would have relatively minor direct impacts on wildlife and habitat. Facility expansion would likely convert areas with various types of permanent cover to landscaped surfaces resulting in minor habitat losses. More and larger facilities would also accommodate more people, resulting in relatively minor increases in wildlife disturbance in the vicinity of the new and expanded facilities. These effects would be relatively minor because habitat values in the vicinity of these facilities is generally low because of the predominance of exotic plants.

Mitigation and Residual Impacts (Alternative B)

Mitigation measures and residual impacts would be the same as described for Alternative A.

3.5 Aquatic Biology

3.5.1 Affected Environment

The Black Canyon Reservoir and Montour WMA RMP Study Area fishery consists primarily of resources present in Black Canyon Reservoir. The RMP Study Area also includes resources in the Payette River immediately upstream and downstream of the reservoir and in the lower reach of Squaw Creek, a tributary entering Black Canyon Reservoir from the north.

3.5.1.1 Black Canyon Reservoir

Black Canyon Reservoir is a transition zone from a cold water fishery upstream to a warm water fishery downstream. IDFG (2001) reported that Black Canyon Reservoir supports a "warm water" type fishery, but provides only marginal fish habitat because sand from upstream land disturbances has covered most habitat. IDFG manages the reservoir according to their general management program. This program is applied to water bodies (lakes, reservoirs, rivers, and streams) that are not suited for "wild trout" or "put-and-take trout" management, and has no special regulations. IDFG's management direction for Black Canyon Reservoir from 2001 through 2006 is to monitor fish population species composition and size structure (IDFG 2001).

Game fish species present in Black Canyon Reservoir include largemouth bass (*Micropterus salmoides*), smallmouth bass (*Micropterus dolomieu*), black crappie (*Pomoxis nigromaculatus*), bluegill (*Lepomis macrochirus*), channel catfish (*Ictalurus punctatus*), and bullhead (*Ameiurus* spp.) (IDFG 2001). None of these species are native to Idaho. Research by Zaroban et al. (1999) on the attributes of 132 freshwater fish species occurring in the Pacific Northwest indicates that the game species present in Black Canyon Reservoir have a warm water temperature preference and are water pollution "tolerant." Zaroban et al. (1999) defined pollution "tolerant" species as "fishes that tend to increase in abundance with human disturbances, particularly in relation to increased siltation, turbidity, and water temperature, and lowered concentrations of dissolved oxygen."

The fishery in Black Canyon Reservoir today generally appears similar to that described by IDFG (1986) approximately 15 years ago. In their fisheries management plan for the years 1986 to 1990, IDFG (1986) stated that Black Canyon Reservoir supports a warm water fishery of bass, crappie, and channel catfish. IDFG (1986) also noted that the reservoir provided only marginal habitat for warm water game species, the same as in the most recent assessment (IDFG 2001).

Sediment deposition in Black Canyon Reservoir since the completion of Black Canyon Dam in 1924 has probably had long-term limiting effects on fisheries habitat. Today, sediment fills approximately 35 percent of the reservoir, having reduced reservoir total active storage capacity from approximately 44,800 acre-feet originally to 29,300 acre-feet at present (Reclamation 2003). Most sediment deposition occurs at the upper end of the reservoir, has effectively filled the original river bed in the area, impedes the normal flow of water into the reservoir, and has resulted in a significant extension of the 100-year floodplain at the confluence of the Payette River and Black Canyon Reservoir (Reclamation 1984). IDFG (2001, 1986) continues to report

that Black Canyon Reservoir provides only marginal habitat for warm water game species because of sediment deposition.

3.5.1.2 Montour WMA and Adjacent Payette River

The Montour WMA Guide (IDFG and Reclamation undated) states that long-range plans include developing a warm water fishery for bluegill and largemouth bass in ponds within the WMA. Smallmouth bass are also present in several man-made ponds on the western side of the Montour WMA. The Guide also states that rainbow trout and mountain whitefish can be caught in the Payette River adjacent to Montour.

Results of electrofishing by IDFG during 1975 in Black Canyon Reservoir and the Payette River in the Montour Valley indicated that non-game species are more abundant than game species in these two water bodies (Reid 1975, in Reclamation 1984). A total of eight game species and nine non-game species were collected in the area sampled. Non-game fish comprised approximately 93 percent of the catch (462 fish) during spring, 80 percent of the catch (389 fish) during summer, and 61 percent of the catch (89 fish) during fall. Suckers (*Catostomus* spp.) made up 75 percent or more of the non-game fish collected each season, while carp (*Cyprinus carpio*) comprised no more than 6 percent of the non-game fish collected each season. The most abundant game species collected were brown bullhead (*Ameiurus nebulosus*) during spring, smallmouth bass and bluegill during summer, and black crappie and pumpkinseed (*Lepomis gibbosus*) during fall (Reid 1975, in Reclamation 1984). Game species collected during 1975 are generally similar to game species present today, except for smallmouth bass which are listed in IDFG's current fisheries management plan for the Payette River downstream but not upstream of Black Canyon Dam (IDFG 2001).

3.5.1.3 Squaw Creek

This tributary enters Black Canyon Reservoir from the north and contains rainbow trout and, in its upper reaches, bull trout. IDFG (2001) manages Squaw Creek to maintain native resident stocks of wild rainbow trout (redband trout) and to conserve bull trout. IDFG's management directives for Squaw Creek include inventorying the status and distribution of redband trout, and monitoring the bull trout population present in the upper Squaw Creek drainage (IDFG 2001). Section 3.6, *Threatened and Endangered Species*, provides additional information on bull trout in Squaw Creek.

3.5.2 Environmental Consequences

3.5.2.1 Alternative A (No Action Alternative)—Continuation of Existing Management Practices

The overall effect of Alternative A on fisheries resources in the RMP Study Area would be similar to existing conditions. In Black Canyon Reservoir, this would include the continued presence of a "warm water" fishery dominated by non-game species, the presence of game species such as largemouth and smallmouth bass, black crappie, and bluegill, and management of the reservoir fishery by IDFG according to their general management program. Fish habitat in the reservoir would continue to be marginal and may gradually decline because of slow but continuing sediment deposition associated with upstream land disturbances.

The Montour WMA ponds would continue to provide the same amount of habitat as at present for stocked "cool water" and "warm water" game species, such as bass and perhaps bluegill. Constructed wetlands on the WMA have been stocked with introduced game fish such as smallmouth and largemouth bass to provide recreation opportunities. These species are also likely to occupy new wetlands developed on the WMA, either through stocking by IDFG or through illegal introduction by the public.

Based on the preceding discussion, implementation of actions associated with Alternative A would not be expected to substantially alter the composition or abundance of fish species present in the RMP Study Area compared to existing conditions. Expected increases in RMP Study Area use, anticipated under any scenario because of projected regional population growth and recreation needs, may result in some reservoir shoreline and near-shore habitat degradation from greater numbers of people and boats. This could impact warm water game species typically associated with shallow habitats through increased turbidity levels and perhaps the presence of higher concentrations of oil and gas during periods of heavy reservoir use by the public using motor boats and PWC. This may result in slightly reduced spawning and feeding success by these species. Increased use of the RMP Study Area also may result in increased angler harvest of game fish in the reservoir, river, and stocked Montour WMA ponds. However, as noted previously, these effects would be anticipated under any management scenario because of projected regional population increases and associated recreation needs and would not be limited only to Alternative A.

Mitigation and Residual Impacts (Alternative A)

Future development of new emergent wetlands/open water ponds may be in wet meadow areas because of the location of water sources. No ground disturbing activities would be undertaken before a field review was conducted to determine the likelihood of occurrence of sensitive species (for example, the spotted frog). If warranted, a sensitive species survey would be conducted following established protocols and seasonal requirements. Project implementation and design would be based on the findings of the survey.

3.5.2.2 Alternative B (Preferred Alternative)—Enhancement of Natural and Cultural Resource Values and Maintenance of Recreational Opportunities

Fisheries resources in water bodies within the RMP Study Area and the overall effect of Alternative B on those resources would be similar to that described for Alternative A, but with some additional benefits. Riparian habitat quality in the RMP Study Area under Alternative B would be protected and enhanced by active grazing management and/or exclusion of livestock in riparian areas. Potential resultant benefits to aquatic resources would include improved shoreline stability, structure, and ground cover; reduced shoreline erosion, sediment delivery, and turbidity in water bodies; improved overhanging cover and shade; possibly reduced water temperature fluctuations; and improved habitat for terrestrial insects (fish food) that may fall to the water's surface. These potential benefits would be more likely in the narrower upper end of the reservoir and along the river through the WMA than in the wider, lower part of the reservoir.

Two other sets of actions would benefit fisheries resources and the public under Alternative B. The first includes developing an additional 25 to 50 acres of ponds in the Montour WMA that would provide more habitat and increased angling opportunities for stocked warm water game

fish. Implementation of long-term pond maintenance measures directed at managing nuisance plants such as Eurasian watermilfoil (discussed previously) would be implemented, ensuring the proper operation of water control structures, and providing adequate water flow to decrease stagnant water, thus maintaining or improving pond habitat for fish and benefit anglers.

Based on the preceding discussion, implementation of actions associated with Alternative B would not be expected to substantially alter the composition of fish species present in the RMP Study Area compared to existing conditions, but it may result in increased fish abundance. Impacts on fisheries habitat and fish resulting from increased public use and angler harvest associated with regional population growth would be expected under Alternative B, the same as described for Alternative A.

Mitigation and Residual Impacts (Alternative B)

No formal mitigation measures are proposed for Alternative B because the actions under this alternative are not anticipated to have substantial adverse impacts on fisheries resources in the RMP Study Area. BMPs listed in Chapter 5, *Environmental Commitments*, are applicable under all alternatives. Therefore, residual impacts are the same as those discussed in detail above.

3.6 Threatened and Endangered Species

3.6.1 Affected Environment

3.6.1.1 Plants

The Ute ladies'-tresses orchid (*Spiranthes diluvialis*) is the only Federally protected plant species that may occur in or near the Black Canyon Reservoir and Montour area. It typically occupies floodplains and wet meadows with little overhanging shrub or tree canopy. Wetland and riparian habitats such as springs, wet meadows, and point bars within river meanders are potential habitat. Ute ladies'-tresses orchids have been found in southeast Idaho and eastern Washington and may occur in suitable habitats between these locations. The most suitable potential tress habitat would occur in riparian communities along the unimpounded reach of the Payette River and possibly on the floodplain at Montour. Some of the wetlands within the Montour WMA would probably not be considered as potential habitat because these areas only developed after ground water levels rose following construction of Black Canyon Dam. Wetlands that were present before construction of the reservoir and the subsequent rise in groundwater levels might provide suitable habitat for tresses. No searches for this species have been conducted on Reclamation lands.

3.6.1.2 Wildlife

Bald Eagle

The bald eagle (*Haliaeetus leucocephalus*) is listed as threatened in Idaho. Populations have expanded dramatically in Idaho and in most of the rest of the lower 48 states in the last 10 years after the use of the pesticide DDT was banned in the United States. Reclamation (1998) and the Idaho CDC indicate that a historic bald eagle nest site located in the Montour WMA has not been used for several years at least. Winter counts along the Payette River from Emmett to Payette have ranged from four to ten in recent years. Reclamation staff report observing as many as 7 bald eagles in the large trees at Black Canyon Park on some winter days. Undoubtedly, some birds also use the Payette River above Black Canyon Reservoir during the winter. The reservoir probably receives only limited winter use because of the poor fishery, general lack of good perch trees except at a few locations, and icing conditions as winter progresses. Eagles that do winter along the river would feed on fish, occasionally waterfowl, and deer killed along Highway 52.

Gray Wolf

The gray wolf (*Canis lupus*) is classified as an experimental non-essential population throughout most of Idaho, including the Black Canyon and Montour area (59 *Federal Register* 60260, November 22, 1994). Wolves typically occupy higher elevation areas during the summer and follow big game animals to lower elevation winter ranges during the winter. Mule deer winter on the southern portion of Squaw Butte and most stay north of Black Canyon Reservoir. A small number of migrants from big game units 32 and 32A will move across the Black Canyon Reservoir towards lands to the south each winter. Wolves could be attracted to the RMP Study Area during severe winters if deer become especially concentrated.

3.6.1.3 Fish

Bull Trout

Columbia River Basin bull trout (*Salvelinus confluentus*) were listed by the FWS as threatened in 1998 (64 *Federal Register* 111, June 10, 1998). In 1999, FWS determined threatened status for all populations of bull trout within the coterminous (lower 48) U.S. (64 *Federal Register* 210, November 1,1999). The FWS proposed the designation of critical habitat and announced the availability of a draft recovery plan for Columbia River Basin bull trout in 2002 (67 *Federal Register* 230, November 29, 2002; FWS 2002a). Proposed critical habitat in the vicinity of the project area includes portions of the Squaw Creek watershed from the confluence of Squaw Creek with the Payette River (Black Canyon Reservoir) upstream. Squaw Creek enters Black Canyon Reservoir from the north.

Black Canyon Reservoir and the Montour WMA are located within the proposed boundary of the Payette River Recovery Subunit for bull trout. However, they have not been proposed as critical habitat or identified as bull trout core areas. The bull trout critical habitat subunit (CHSU, the core unit) within the Payette River Recovery Subunit that is nearest the RMP Study Area is the Squaw Creek watershed (FWS 2002a). Within the Squaw Creek CHSU, proposed critical habitat includes 120 miles of streams (28 percent of the total) that provide foraging, migratory, and over-wintering habitat and allow for genetic exchange among bull trout local populations. Black Canyon Reservoir, the Payette River downstream of Black Canyon Reservoir, and the Payette River between Black Canyon Reservoir and the confluence of the North and South Forks of the Payette have not been proposed as bull trout critical habitat or identified as bull trout core areas (FWS 2002a).

Ideal habitat for bull trout includes clean cold waters with large woody debris, undercut banks, boulders, and deep pools (Quigley and Arbelbide 1997). FWS (2002b) stated that bull trout require stable stream channels, clean spawning gravels, complex and diverse cover, unblocked migration routes, and are seldom found in waters warmer than approximately 59 to 64°F. Threats to bull trout include land management practices such as logging, grazing, and road construction, where such practices have degraded habitat through increased sedimentation of spawning gravels, high stream temperatures, and poor water quality (FWS 2002b). Additional threats to bull trout include dams and other barriers (such as impassable culverts) that block adult migrations and access to spawning habitat, and introduced non-native fishes (such as brook trout) that can hybridize with, compete with, and prey on bull trout (FWS 2002b).

The FWS (1998) stated that recent limited surveys indicate bull trout are uncommon in Black Canyon Reservoir. This is not unexpected given the cold, clean, and generally complex habitat requirements of this species as opposed to the warm water, sedimentation, and marginal fish habitat associated with Black Canyon Reservoir (see discussion in Section 3.5, *Aquatic Biology*). The FWS (2002a) noted that "although no major dams prevent bull trout inhabiting the upper portions of the Squaw Creek watershed from entering Black Canyon reservoir, irrigation diversions form barriers to immigrating adults and divert emigrating juveniles into areas with lethal conditions." A map prepared by the IDFG and presented in Reclamation's 1998 Biological Assessment addressing operation and maintenance of their facilities in the Snake River Basin (Reclamation 1998) indicates that bull trout are not present in either the Payette River below the confluence of the North and South Forks (including the Black Canyon and Montour reaches) or

in lower Squaw Creek near the reservoir. In conclusion, it would appear that bull trout may occasionally occur in the RMP area but are not resident there because of the marginal habitat quality.

3.6.2 Environmental Consequences

3.6.2.1 Alternative A (No Action Alternative)—Continuation of Existing Management Practices

Plants

The Ute ladies'-tresses orchid is the only Federally protected plant species that may occur in or near the RMP Study Area. Reclamation has not developed detailed plans for any future developments, trails, parking areas, new wetlands, other facilities, or water diversion sites. For sites where these facilities and wetlands might be developed, Reclamation would identify those areas that could be potential Ute ladies'-tresses habitat. Areas of potentially suitable habitat in the vicinity of new wetlands where the hydrology could be affected by wetland development would also be identified. Typical potential habitat includes wetland and riparian areas such as springs, wet meadows, and river meanders. Potential habitat may be identified by locating plants that are usually associated with the species or through cover type mapping. In areas of potential habitat, Reclamation would either change the location of a proposed facility or wetland to avoid direct and indirect impacts, including surface disturbance and hydrologic changes, or not construct the facility or wetland. If potential habitat is found near existing or proposed trails, wetlands, or other high-use public recreation areas where the potential for trampling exists, access restrictions would be implemented and enforced. Reclamation would work with FWS to design a system to effectively restrict access without calling attention to the presence of a threatened species. Implementation of these actions would be expected to avoid all potential impacts on the Ute ladies' tresses orchid and potential habitat and result in an ESA determination of may affect, but not likely to adversely affect, from implementation of Alternative A. Reclamation would coordinate with FWS before undertaking actions that would be considered exceptions to this habitat avoidance policy.

Wildlife

Bald Eagle

Bald eagles use the RMP Study Area mostly during the winter, feeding on fish, occasionally waterfowl, and deer killed along Highway 52. None of the RMP actions under Alternative A would affect the quantity or availability of fish or waterfowl as food sources for eagles. The projected increase in recreational use of the area would occur primarily during warmer months when eagles are not present. Traffic volumes are expected to increase on Highway 52 even during the winter because of an increase in the local human population (see Section 3.7, *Recreation*). Higher traffic volumes would likely result in more vehicle/deer collisions along the road. This increase in carrion would provide additional food for scavenging bald eagles, which would be beneficial. However, eagles attracted to a highway to feed on carrion are also subject to being hit by vehicles, so the potential for eagle deaths would also increase, especially for younger, inexperienced birds. Taken as a whole, the ESA determination indicates that changes in the RMP Study Area during the next 15 years may affect, but are not likely to adversely affect, bald eagles. If bald eagles again nest in the RMP Study Area in the future, Reclamation would develop a nest site management plan for the area around the nest.

Gray Wolf

The likelihood of a gray wolf occurring within the RMP Study Area is low, but possible. The greatest chance of an occurrence is during a severe winter when more than a normal number of deer, the wolf's primary potential prey in the RMP Study Area, would be driven to lower elevations by deep mountain and foothills snow. Alternative A would not be expected to have adverse impacts on deer or deer habitat; therefore, no impacts on wolves would be expected as a direct result of actions under Alternative A.

An increase in the local human population of the area around the RMP Study Area would result in more traffic on Highway 52 and more vehicle deer collisions, especially during severe winters. The availability of more dead deer near the highway for scavenging wolves could result in a slightly higher potential for vehicle wolf collisions, although this is considered to be only a remote possibility because of the location of the RMP Study Area. Alternative A would have no effect on wolves but unrelated human population increases in the vicinity of the RMP Study Area would cause an ESA determination of may affect, but would not adversely affect gray wolves.

Fish

Bull Trout

Implementation of actions associated with Alternative A would not extend into or affect Squaw Creek, and would therefore not impact bull trout or bull trout proposed critical habitat present in this drainage. The two resident and three potential local bull trout populations present in Squaw Creek headwater drainages and the larger and possibly migratory bull trout present farther downstream in Squaw Creek would not be directly or indirectly affected by implementation of Alternative A, the same as under existing conditions. As noted in Section 3.6.1, Reclamation's 1998 Biological Assessment on the operation and maintenance of their facilities in the Snake River Basin indicates that bull trout are not present in the Black Canyon Reservoir or Montour reaches of the Payette River or in lower Squaw Creek near the reservoir. Bull trout may occasionally occur in the RMP Study Area but are not resident there because of marginal habitat quality in the reservoir.

Implementation of Alternative A would not result in any of the FWS-defined adverse effects on bull trout or proposed bull trout critical habitat in Squaw Creek.

Conservation Measures and Residual Impacts (Alternative A)

All potential impacts to Ute ladies'-tresses habitat would be avoided because of the measures that would be undertaken by Reclamation.

No formal conservation measures are proposed for either the bald eagle or gray wolf because RMP actions are not expected to have any adverse effects on these species.

No formal conservation measures are proposed for bull trout because the actions under this alternative are anticipated to have no adverse effects on bull trout or bull trout proposed critical habitat in or near the RMP Study Area.

3.6.2.2 Alternative B (Preferred Alternative)—Enhancement of Natural and Cultural Resource Values and Maintenance of Recreational Opportunities

Plants

Potential impacts to Ute ladies'-tresses orchids would be the same under Alternative B as described for Alternative A. This would result in an ESA determination of may affect, but not likely to adversely affect for Ute ladies'-tresses orchids for Alternative B.

Wildlife

Potential impacts to the bald eagle and gray wolf would be the same under Alternative B as described for Alternative A, resulting in an ESA determination of may affect, but not likely to adversely affect for these species.

Fish

Implementation of actions associated with Alternative B would not adversely impact bull trout or bull trout proposed critical habitat in Squaw Creek, for the same reasons as described for Alternative A. Possible minor benefits to proposed critical habitat near the mouth of Squaw Creek may result from actions directed at protecting and enhancing riparian habitat quality along the reservoir shoreline through active grazing management and/or exclusion of livestock in riparian areas.

Conservation Measures and Residual Impacts (Alternative B)

No formal conservation measures are proposed for Alternative B because the actions under this alternative are anticipated to have no adverse effects on Ute ladies'-tresses orchids, the bald eagle, gray wolf, or bull trout or bull trout proposed critical habitat in or near the RMP Study Area. Potential residual impacts would be the same as described for Alternative A.

3.7 Recreation and Access

3.7.1 Affected Environment

Black Canyon Reservoir is located in southwest Idaho, approximately 30 miles northwest of Boise near the town of Emmett in Gem County. Lands owned by Reclamation at Black Canyon Reservoir total approximately 3,900 acres, including approximately 1,100 reservoir surface acres and 12 miles of shoreline. Black Canyon Reservoir and Montour WMA are located in the Payette River valley and offer a wide variety of recreational activities.

There are several other recreation providers in the region that offer flat-water oriented recreational opportunities as well as hunting and wildlife viewing opportunities, including: Idaho Department of Parks and Recreation (IDPR), U.S. Army Corps of Engineers (USACE), USFS, and IDFG. Several of the reservoirs located within the Black Canyon vicinity are comparable to Black Canyon Reservoir. However, because Black Canyon Reservoir is operated for irrigation supply, its water level remains high, even in late summer. Most of the other reservoirs experience lower water levels and limited boat access during this time. Two comparable IDFG WMAs are near Black Canyon: Fort Boise and Payette River. Both are managed for waterfowl and upland game birds and are similar in size to Montour WMA (1,300 and 1,200 acres, respectively). In addition to comparable reservoirs and WMAs, there are several other recreation opportunities in the Black Canyon vicinity. The Boise National Forest offers many year-round recreation opportunities and IDFG maintains ten Sportsman Access areas in the Black Canyon vicinity.

3.7.1.1 Recreation Facilities

Developed Recreation Facilities

Overview

Developed recreation facilities are provided by Reclamation in five locations around Black Canyon Reservoir: Black Canyon Park, Cobblestone Park, Montour WMA, Triangle Park, and Wild Rose Park. Public use at Black Canyon Reservoir is concentrated at these facilities; however, dispersed use occurs at numerous locations around the reservoir. As shown in Table 3.7-1, recreation facilities include picnic areas, a campground, courtesy docks, a swimming area, boat launches, restrooms, and various game courts (such as volleyball and horseshoes). No formal hiking or mountain biking trails are provided at Black Canyon Reservoir. Minor trails, particularly for angler shoreline access, exist within developed recreation facilities, but no continuous shoreline trail exists.

In general, the park season at each facility extends from the weekend before Memorial Day through the weekend following Labor Day. The campground at Montour WMA usually remains open a few weeks later than the other facilities to accommodate hunters and anglers. The restrooms at Wild Rose Park are open year-round to accommodate travelers on Highway 52. The hours of operation for each facility is dawn to dusk, with the exception of the restrooms at Wild Rose Park, which remain open 24 hours a day.

TABLE 3.7-1
Facility locations and access at Black Canyon Reservoir and Montour WMA

	Cobblestone Park	Wild Rose Park	Black Canyon Park	Triangle Park	Montour Campground	Montour WMA	County Boat Ramp #1	County Boat Ramp #2	County Boat Ramp #3
Acres	8.4	11.3	12.0	6.5	6.0	1,100			
Road Access (Paved/Gravel)	P	P	P	P	P	P	G	G	G
Interior Circulation(Paved/Gravel)	G	P	P	G	P	P/G	G	G	G
Car Parking Spaces (U=undefined)	50(U)	79	106	75(U)	35	5 areas (U)	U	U	U
Boat Trailer/Car Parking	NA	NA	37	U	NA	NA	U	U	U
Boat Ramps (lanes)	NA	NA	2	1	NA	NA	1	1	1
Courtesy Docks	NA	NA	11	4	NA	NA	1	1	1
Picnic Sites – Single Units	9	20	40	9	27[/1/]	NA	NA	NA	NA
Group Picnic Shelters	NA	1	2	NA	NA	NA	NA	NA	NA
Trails/Paths	yes	yes	yes	yes	yes	yes	no	no	no
Volleyball Areas	no	no	2	1	1	no	no	no	no
Horseshoe Pits	no	no	1	1	1	no	no	no	no
Information/Interpretation Signage	yes	yes	yes	yes	yes	no	yes	no	no
Separate (buoyed) Swimming Area	0	0	1	0	NA	NA	0	0	0
Campsites - Single Units	NA	NA	NA	NA	17	NA	NA	NA	NA
Flush Restrooms	0	1	0	0	0	0	0	0	0
Vault Restrooms	1	0	2	3	1	0	0	0	0
Potable Water	yes	yes	yes	no	yes	yes	no	no	no
Electrical Hookups	NA	NA	NA	NA	no	NA	NA	NA	NA
Dump Stations	NA	NA	NA	NA	yes	NA	NA	NA	NA
Maintenance/Storage Facilities	yes	no	yes	no	no	no	no	no	no

Source: Reclamation and EDAW, 2002, 2003.
[/1/] Picnic sites at Montour Campground include 17 sites associated with campsites and 10 other sites.

Facilities

Black Canyon Park. Black Canyon Park is a 12-acre site located approximately 0.5 miles upstream of Black Canyon Dam. The park is situated at the edge of and overlooking the reservoir on a gentle slope with large grassy areas and numerous shade trees. Entrance to the site is

controlled by an automated gate at which a $2 per vehicle day use fee is collected (fee amount in 2004). Currently, Black Canyon Park is the only day use facility at Black Canyon Reservoir with a day use fee. The gate can be opened with a code by visitors with season passes or reservations for one of the group picnic shelters.

A $1 million renovation at Black Canyon Park was completed in 1993. Improvements included a new boat ramp and docks, roads and parking areas, two restroom buildings, two group picnic shelters, new picnic tables, a renovated irrigation system, landscaping, and lawn areas. The site currently provides individual picnic tables, two group picnic shelters, an unsupervised swimming beach, internal asphalt trails, volleyball court, horseshoe pits, five tie-up docks, and a boat launch. The accessible picnic sites are located along the asphalt walkway that roughly parallels the shoreline. The boat launch has a concrete ramp with two lanes as well as two tie-up docks. The five additional tie-up docks are adjacent to the swimming area. The group picnic shelters are available for rent for $125/day (fee amount in 2004). Each shelter has electric power and can accommodate approximately 50 people. There are two restroom buildings at this site along with potable water. Each restroom building provides two toilets. There are 143 parking spaces, including eight accessible spaces, provided throughout the site in four separate areas.

An approximately 2,300 square foot maintenance and office building, constructed along with the park renovations in 1993, is located at the eastern edge of the park. The building is accessed via a gated maintenance road directly east of the park entrance. Currently, five employees work in the building. The building has six parking spaces, including one accessible space, and an enclosed maintenance yard.

Black Canyon Park is the only major location providing the combination of a park environment on the reservoir shore, swimming, and boating access to reservoir waters. As a result, Black Canyon Park receives the most intensive use and is most subject to crowding. During peak periods, the parking lots fill by mid-day and either: (1) visitors begin parking along the highway and walking into the park; or (2) boaters launch from, and end up parking at one of the ramps along Highway 52. These conditions raise highway safety concerns as well as illustrating capacity problems.

Currently, the park is closed during the spring and fall; this limits use and may increase demand at other parks and facilities. Also, during the season when the park is open, some users have suggested that it is not open early enough in the morning or late enough in the evening to properly meet demand.

Cobblestone Park. Cobblestone Park is a 8.4-acre site located downstream from Black Canyon Dam across the reservoir from Wild Rose Park. The park is accessed from a county road with a manually operated gate. This site consists primarily of a large grassy area with shade trees, picnic tables, a gravel parking area, and an accessible single vault toilet. There is also a storage shed in the parking area that is currently empty. Potable water is available at this site. During the park season, a park host resides at the park providing oversight of the park and information to visitors. This site is primarily used as an angler access site for bank fishing.

In 2001, renovations were completed that included a new grass area and installation of landscape irrigation. An accessible paved parking pad was installed at Cobblestone in 2002.

Adjacent to Cobblestone Park, a dirt road leads to a large, underutilized area along the Payette River. This area is state owned, and is used by anglers for bank fishing and could be the focus of additional facility and/or activity development. However, this area is in the floodplain and is covered with water during rare and extreme spring flood events.

Another aspect of Cobblestone Park is its proximity to the Thunder Mountain Line railroad. The Thunder Mountain Line uses the railroad alignment/right-of-way that passes through the RMP Study Area, including the south shore area of the reservoir and the southern portion of Montour WMA. Cobblestone Park is currently a stopping and gathering point for the theme rides offered by the railroad.

Wild Rose Park. Wild Rose Park is a 11.3-acre site located just downstream of Black Canyon Dam. The park is located at the site of the construction camp used while Black Canyon Dam was being built. The park is situated at the edge of and overlooking the river on a gentle slope with large grassy areas and numerous shade trees. There is also a large undeveloped area adjacent to the river that is popular for bank fishing.

Wild Rose Park was originally called Dam Park North; however, it was renamed Wild Rose Park in the spring of 1994 after a significant renovation. These renovations included new roads and parking areas, a new irrigation system, new picnic sites, internal paths, a restroom and associated septic system, a decorative stone wall, a gazebo, group picnic shelter, landscaping, and lawn areas. In addition, a new well was drilled for the use by the Black Canyon Dam facility and Wild Rose Park.

Wild Rose Park currently provides individual picnic tables, a gazebo, and a group picnic shelter. It has also traditionally served as a rest stop along the highway with travelers utilizing the restrooms and the "pet potty area." The restrooms at Wild Rose Park are kept open year-round, primarily because of the park's role as a rest stop for highway travelers. The group picnic shelter and gazebo are each available for rent for $125 per day (fee amount in 2004). The shelter has electric power and can accommodate approximately 50 people. The gazebo is popular for weddings as it is located in a picturesque spot under mature shade trees overlooking the river. Wedding receptions, along with group picnics and family reunions, are often held in the group shelter. One restroom building at this site provides a total of four toilets. There are 98 parking spaces, including two accessible spaces.

Triangle Park. Triangle Park is a 6.5-acre site located approximately 1.0 mile upstream of Black Canyon Dam. This site is more rustic than the other three facilities in both feel and in the type of amenities provided. This site has unique stone features built by the Youth Conservation Corps. The site provides individual picnic tables, a gravel parking area, vault toilets, a covered overlook, and a boat launch. Group camping is allowed at this site on a reservation basis only (Personal Communication, Kathy Mondor, August 2002). The boat launch has a concrete ramp with one lane as well as two tie-up docks. There is no water or electricity at the park.

Generally, the park is underutilized, because (at least in part) it does not have paved parking, water, or electric power, and it is in an area of the reservoir that has been subject to high levels of sedimentation. Sediment build-up is a particular problem right off the boat ramp, limiting the type and number of boats that can use the ramp and causing problems with boats running aground.

Montour Wildlife Management Area. Historically, the Montour WMA was the location of the small valley town of Montour. After the completion of Black Canyon Dam in 1924, sediment began filling the upper end of Black Canyon Reservoir triggering a series of flood events in the river's floodplain, including Montour. After several attempts to mitigate the floods, Reclamation purchased the land within the 100-year floodplain in 1976 and designated the area as Montour WMA. IDFG and Reclamation entered into a cooperative agreement in 1983 to manage the 1,100-acre area to protect and enhance wildlife habitats and to provide a variety of recreation experiences. Montour WMA is a designated wildlife viewing site in the official Idaho Wildlife Viewing Guide.

The Montour WMA Management Plan (Montour WMA Plan) was completed in 1984 to provide a guide for the orderly, coordinated development and management of the land and water resources of the Montour WMA for optimum public benefit (Reclamation 1984). The Montour WMA Plan called for three types of land use within the Montour WMA: recreation, wildlife enhancement, and agricultural production and pasture. To date, these are the only land uses within the Montour WMA, although only a portion of the development directives outlined in the Montour WMA Plan have been implemented. One exception is a single private residence remaining from the historic Montour town site, referred to as the Palmer House. The Montour WMA Plan laid out a phased conceptual plan for recreation development including a campground, picnic area, and bridle and interpretive trails.

Montour WMA consists of two somewhat distinct areas: a large complex of riparian vegetation, natural and constructed wetlands, and agricultural land managed for waterfowl and upland game bird habitat, and an area with a developed campground and many of the foundations from the historic Montour town site. The primary objectives of the Montour WMA were to provide habitat for waterfowl and upland game and to provide game bird hunting and other wildlife-related recreation opportunities (IDFG undated). Waterfowl habitat has been improved by the installation of nesting boxes and constructed wetlands. Upland game habitat is also provided by standing corn or other grains managed through farming and grazing lease agreements.

The Montour Campground consists of 17 individual sites each with asphalt parking spur, picnic table, and cooking grill. The parking spurs can accommodate smaller recreational vehicles (RVs) or trailers; however, RV hook-ups are not currently provided. Utilities include a restroom with vault toilets, water faucets throughout the site, and an RV dump station. Non-chlorinated water for public use is provided from an on-site well. Three large fire pits are available at the campground.

Activities outside the campground at Montour WMA include fishing, hunting, hiking, and wildlife observation. Waterfowl and upland game bird hunting are the most popular activities at Montour WMA, followed by fishing, wildlife observation and hiking, and big game hunting (Personal Communication, Tim Shelton, IDFG, September 2002). Within Montour WMA there are several unofficial trails. Designated interpretive and bridle trails proposed in the 1984 Montour WMA Plan were not implemented. Unofficial trails are located predominantly along the Payette River and around Twin Ponds and are most likely used by anglers and hunters. The gravel roads in Montour WMA are also used by hikers and equestrians as an unofficial trail system. In addition, an area within the WMA adjacent to the bridge over the Payette River is used as a put-in site by kayaks and canoeists.

Recreation impacts on vegetation and wildlife resources are a concern at Montour WMA. IDFG specifically closes key nesting areas to all recreational use each year during nesting season, from February 1 to July 1. The closures are identified via signage and through coordination with user groups. However, enforcement of the closures is difficult and violations are a major problem. Intrusion into nesting areas during the nesting season is one of the most significant concerns, whether as a result of activities of human users or inadequate control of domestic animals. Specific to domestic animals, dog trials that occur at Montour WMA are an allowed use. IDFG has guidelines for proper dog handling in sensitive habitat areas and works with organized groups to manage where the trials are conducted during sensitive times of year; however, casual users present a bigger management challenge (Personal Communication, Tim Shelton, September 2002).

General, area-wide user group conflicts and safety concerns are emerging in the Montour WMA between both hunting and general wildlife observation interests, and different types of hunters. Vehicle circulation and parking problems are a related concern. At present, hunters and other users simply park along the roads or at self-selected gathering points. No controls are in place to manage circulation or parking (Personal Communication, Tim Shelton, September 2002).

3.7.1.2 Undeveloped Recreation Sites

Seven dirt or gravel turnouts are located along Highway 52, all of which are located between the road and the north shore of the reservoir. These turnouts provide view access, access to the reservoir, and boat trailer parking. Boat ramps and small docks are located at three of these turnouts. One of these is west of Black Canyon Park (designated as ramp #1) and two are to the east (designated as ramps #2 and #3). Ramp #2 is just west of Triangle Park, and ramp #3 is approximately one mile east of that park. Each of these ramps is accessed and used via a small turnout area along the highway, and each of them features a small dock for loading and unloading boats. Ramp #1 is the most heavily used by boaters, especially when Black Canyon Park is either closed or full. This ramp is also used by boaters who do not wish to pay the fee at Black Canyon Park or who simply want a less formal place to stage their boating activities. The other ramps are less busy, but are popular with PWC users because of their location adjacent to the reservoir (i.e., where sedimentation is an issue of concern to power boaters).

Use of these ramps can cause both highway safety and general traffic circulation problems. As noted above, the ramps are served only by small, unmarked turnouts along the highway. When these sites are busy, the turnouts fill rapidly with parked vehicles and trailers, and users begin to park along the highway after launching their boats. This occurs predominantly at Ramp #1 because it is a focus for overflow when Black Canyon Park is full, but drop-off and parking safety can also be a concern at Ramp #2.

In addition to these boat ramps, several other undeveloped dirt and gravel access points are used to launch boats along the north shore.

3.7.1.3 Road Access

The primary access to the RMP Study Area is State Highway 52 (SH-52), which runs east and west and parallels the north side of Black Canyon Reservoir for approximately 5 miles. SH-52 leaves the shoreline west of Squaw Creek and runs east another 2 miles to its junction with Old

Montour Road. The highway has no traffic lights and no stop signs along this stretch. This major arterial is a 2-way, 2-lane road. It has a paved asphalt surface with 11- to 18-foot wide lanes and 2- to 7-foot wide gravel shoulders. The speed limit is generally posted as 55 mph, although there are several locations where it is reduced to recommended speeds of either 50, 45, or 35 mph because of tight curves, especially near Triangle Park (Personal Communication, Gail Newlun, May 15, 2002).

SH-52 connects Reclamation's five recreation areas. Three of the recreation areas, Wild Rose Park, Black Canyon Park, and Triangle Park, have entrances directly off of SH-52. The other two, Montour WMA campground and Cobblestone Park, can each be accessed from separate spur roads off of SH-52.

Seven dirt or gravel turnouts are located along SH-52, all of which are located between the road and the reservoir. These turnouts provide view access, access to the reservoir at three separate boat launches, and boat trailer parking. During peak season weekends and holidays at the reservoir, the use of these highway turnouts often becomes a serious safety hazard. To access boat ramps at these turnouts during peak-use times, drivers must frequently turn around, stop, or back up on the highway to maneuver among the vehicles and trailers haphazardly parked in these turnouts. This stretch of SH-52 is used not only by visitors to the reservoir, but also by residential traffic, utility vehicles, and logging trucks. The road gets peak usage on weekends and holidays during summer months. Data collected by ITD in 2000 indicate that the Average Daily Trip (ADT) count for vehicles on SH-52 decreases from west to east near the reservoir. The ADT count equaled 1,800 between Idaho Boulevard and the dam (3 miles), 1,600 between the dam and the Old Montour Road turnoff (7 miles), and 1,100 between the Old Montour Road turnoff and SH-55 at Horseshoe Bend (9 miles) (ITD 2000).

The Gem County Sheriff responded to 29 motor vehicle accidents on SH-52 between mile marker 37 (Plaza Road) and mile marker 44 (east of Old Montour Road) from January 1996 through June 2002. Table 3.7-2 shows that the number of accidents along this section of highway has either remained constant or increased each year since 1997.

TABLE 3.7-2
Motor Vehicle Accidents in the Vicinity of Black Canyon Reservoir

Year	Number of Motor Vehicle Accidents
1996	4
1997	2
1998	2
1999	4
2000	4
2001	5
2002 (January – June)	8

Source: Gem County Sheriff's Department, 2002

In addition to SH-52, a few additional roads exist within or adjacent to Reclamation lands at Black Canyon Reservoir. Wild Rose Park and Black Canyon Park are accessed by paved roads off of the highway to parking and other facilities within the park. The paved access roads are typically two lanes wide and have gravel shoulders. Triangle Park is accessed by a two lane

dirt/gravel road off of SH-52. These access roads to and within the parks are owned and maintained by Reclamation.

Reclamation has designated parking areas at four of the five recreation areas associated with Black Canyon Reservoir. There are 143 paved parking spots at Black Canyon Park, 98 paved parking spots at Wild Rose Park, approximately 100 gravel parking spots at Triangle Park, and approximately 50 gravel parking spots at upper Cobblestone Park. Parking off of the pavement at Black Canyon and Wild Rose parks is prohibited and enforced by towing. A considerable amount of parking occurs along Hwy 52 when lots become full at these recreation areas during busy summer weekends.

Cobblestone Park, directly across the river from Wild Rose Park, can be accessed from SH-52 using Old Dam Road located west of the reservoir and downstream of the dam. Old Dam Road is gravel and is owned and maintained by Gem County. This road is typically 32 feet wide and has shoulders except where it runs along the hillside (Personal Communication, Francie Bassett, May 15, 2002). No significant maintenance or operation issues are associated with this road. County roads in the project area that are gravel are typically re-graded every 10 days to 2 weeks and are plowed as needed in the winter (Personal Communication, Dennis Pulley, May 15, 2002).

Access to the Montour WMA is available by turning south at the junction with the Ola Highway. The Montour WMA is east of the reservoir, one mile south of SH-52 on Old Montour Road. A series of gravel roads are located within the WMA, remnants of the street grid of the old town of Montour. These roads now provide access for recreation activities such as hunting, fishing, hiking, and camping, as well as maintenance and management activities and access to one residence within the WMA. Five parking areas are available to recreationists and hunters in the WMA. The campground near the old Montour town site has individual parking spots at each campsite. Roads in the WMA are gravel and typically 32 feet wide. Roads within the WMA are owned by Gem County and maintained by the Gem County Road and Bridge Department (Personal Communication, Francie Bassett, May 15, 2002). No significant maintenance or operation issues are associated with this road except that there is infrequent flooding that periodically covers roads within Montour WMA (Personal Communication, Dennis Pulley, May 15, 2002). Secondary access to the WMA is available on the south side of the reservoir on Shalerock Road.

3.7.1.4 Trails

Few trails are available within or near recreation areas at Black Canyon Reservoir, with the exception of the Montour WMA. Hikers have forged a few "unofficial" trails adjacent to the parks, but there are no official trail routes outside the parks. Trail use is generally limited to people accessing the parks and shorelines from SH-52. Several unofficial trails are in use within Montour WMA. Designated trails proposed in the 1984 Master Plan for Montour were never implemented because of the lack of a cost-share partner. Unofficial trails are located predominantly along the Payette River and around Twin Ponds and are most likely used by fisherman, hunters, and bird watchers. The gravel roads in Montour are also used by hikers and equestrians as an unofficial trail system.

3.7.1.5 Visitor Origin and Activities

In 2002, park staff at Black Canyon Park conducted instantaneous counts of vehicles and park visitors on 11 different days during August and September. Because of limited resources, Black Canyon Park was the only facility at which instantaneous counts were conducted. Although limited in scope, these counts provide useful information regarding visitor origin and the types of activities in which visitors participate. Given that Black Canyon Park is the busiest of the five facilities at the reservoir, these results may be representative of the visitor origin at the other facilities. Since each facility provides different recreation opportunities and experience levels, the types of activities participated in at each site likely vary somewhat from those at Black Canyon Park.

Visitor origin was determined by noting the county of origin on license plates during the instantaneous counts of vehicles and vehicles with trailers. As shown in Table 3.7-3, nearly half of all visitors to Black Canyon Park were from Ada County. This figure suggests that the park serves as a popular recreation destination for residents of the Boise metropolitan area. Most of the remainder of visitors were from Gem County and the adjacent counties of Canyon and Payette. In addition, a number of visitors were from the state of Oregon which is approximately 30 miles west of Black Canyon Reservoir and easily accessed by Highway 52 and Interstate 84.

TABLE 3.7-3
Origin of visitors to Black Canyon Park

Idaho Counties	Percent
Ada County	46 percent
Canyon County	19 percent
Gem County	11 percent
Payette County	10 percent
Washington County	2 percent
Boise County	2 percent
Other[1]	3 percent
Other States	
Oregon	5 percent
Other[2]	2 percent
Total	100 percent

[1]Other counties include Bannock, Owyhee, Elmore, Owyhee, Valley, and Nez Perce.

[2]Other states include California, Utah, and Washington.

Source: Reclamation, EDAW, Inc. 2002

Instantaneous counts were also taken of visitors while they were participating in different recreation activities. Table 3.7-4 shows all of the types of recreation activities visitors participated in while visiting Black Canyon Park. The most common activity at Black Canyon Park appears to be picnicking. As noted in Table 3.7-4, other popular activities include power boating/waterskiing and swimming/sunbathing. While nearly half of the park visitors participated in picnicking, this wide range of activities indicates that the park provides numerous outdoor recreation opportunities.

TABLE 3.7-4
Activities participated in at Black Canyon Park

Activity	Percent participating
Picnicking	48
Power boating/Waterskiing[1]	29
Swimming/Sunbathing	13
Volleyball	4
PWC use	3
Bank fishing	1
Boat fishing	1
Other[2]	1
Total	100

[1]Power boating/waterskiing percentage based on counts of individual boats and an assumption of 5 people per boat.

[2]Other activities include birdwatching, horseshoes, canoeing/kayaking, windsurfing, and sailing.

Source: Reclamation, EDAW, Inc., 2002

3.7.1.6 Current Recreation Activities

Water-Based Activities

Water-based recreation activities in the RMP Study Area include fishing, boating, waterskiing, PWC use, and swimming.

Fishing is a popular activity throughout the Black Canyon Study Area. The primary fish species sought by anglers at Black Canyon Reservoir are smallmouth bass, rainbow trout, crappie, white fish, bullhead and channel catfish, while the primary fish species found within Montour WMA are largemouth bass and rainbow trout (see Section 3.5, *Aquatic Biology*). Both bank fishing and fishing from a boat occur at Black Canyon. IDFG is responsible for issuing permits and regulating fishing activities at Black Canyon, as well as ensuring compliance with IDFG regulations.

Motorized boats are the principle means to access Black Canyon Reservoir. Motorboats support activities such as waterskiing, fishing, and power boating. Presently, there are no limitations on the number of motorized boats allowed on the reservoir and there are no posted speed limitations; however, motorized boats must operate in a clockwise direction. Black Canyon has also experienced an increase in the use of PWC. User conflicts can occur when PWC users disrupt fishing activities and cause safety concerns when they jump boat wakes or pass too close to other boaters.

Swimming is also a popular activity at the reservoir although there is only one swimming area, at Black Canyon Park. None of the recreation areas offer any lifeguard services to facilitate this activity.

Land-Based Activities

Land-based recreation activities in the RMP Study Area include camping, picnicking, hunting, wildlife observation, and informal hiking and unauthorized ORV use.

Currently, camping occurs primarily in the only developed campground in the RMP Study Area, Montour Campground. Camping is limited to no more than 14 days within any 30-day period. Limited group camping occurs at Triangle Park. Camping at Triangle Park is limited to no more than one night and is by reservation only. Dispersed camping is also becoming a concern around Black Canyon Reservoir. Areas most often used at present include Squaw Creek and highway Ramp #3. However, none of these areas are currently posted as no camping zones. Picnicking occurs at all four of the developed recreation facilities at both individual picnic sites and group picnic shelters.

Hunting occurs mainly in the Montour WMA. Primary species sought by hunters include upland birds such as pheasants, gray partridge, and California quail as well as a variety of waterfowl. Natural pheasant populations are supplemented with the release of game farm pheasants as part of the IDFG Pheasant Stocking Program. To hunt pheasants at Montour WMA, hunters must purchase a WMA permit from IDFG in addition to other required license, tag, and permit fees. In general, pheasants are released twice a week throughout the hunting season. In 2001, 764 hunters purchased a WMA permit for Montour WMA. That same year, 1,180 pheasants were released at Montour WMA with a harvest of 1,021 (IDFG 2002a). This figure represents an 87 percent harvest ratio. In comparison, Fort Boise WMA and Payette River WMA had 83 percent and 58 percent harvest ratios, respectively (IDFG 2002a). Bird hunting is permitted over the entire area, with the exception of a safety zone established around the campground and historic Montour town site. IDFG is responsible for issuing permits and regulating hunting activities at Montour WMA, as well as ensuring compliance with IDFG regulations throughout the RMP Study Area. In addition to hunting, random shooting and target practice occur in the RMP Study Area as a whole.

Montour WMA offers the opportunity to view a wide range of migratory and resident birds. Montour WMA is a designated wildlife viewing site in the official Idaho Wildlife Viewing Guide.

There are few trails within or near recreation areas at Black Canyon Reservoir. Hikers have forged a few "unofficial" trails adjacent to the parks but there are no official trail routes outside the parks. Trail use is generally limited to people accessing the parks and shorelines from Highway 52. The gravel roads in Montour are used by hikers and equestrians as an unofficial trail system.

All Reclamation lands, agency-wide, are formally closed to ORV use unless specifically opened as per 43 Code of Federal Regulations, Part 420. At Black Canyon Reservoir and Montour WMA all lands are closed; however, unauthorized ORV use frequently occurs at Montour WMA.

Special Events

Specific areas of Black Canyon Reservoir are available for group use for events such as reunions, weddings, and large picnics. Five areas are available for reservation: the gazebo and picnic

shelter at Wild Rose Park, two picnic shelters at Black Canyon Park, an area of Triangle Park for group camping, and the Montour WMA near the historic town site. Use of these areas requires a reservation made through park staff and payment of a $125/day rental fee for each facility (fee amount in 2004).

Large, annual events are also held at Black Canyon Reservoir. For example, in 2002 the Boise Aeros Multisport Club used Black Canyon Park for the Emmett Triathlon. In addition, Reclamation, along with several other agencies, sponsors an annual event called Catch a Special Thrill. This event, held at Black Canyon Park, involves taking children with disabilities and terminal illnesses out in boats to go fishing.

In general, large special events require a Special Use Permit that has to be reviewed and approved by the Area Manager. Special events also require payment of an administrative fee and the rental fee of any facilities required for the event (e.g. a group picnic shelter). The cost of the permit varies depending upon the number of people participating in the event and the number of facilities required for the event.

3.7.1.7 Recreation Management

The overall management and maintenance of recreation at Black Canyon Reservoir and Montour WMA is carried out by Reclamation with assistance from Gem County and IDFG. Except for a short period of time in the mid-1990's, Reclamation has been the primary agency responsible for managing and maintaining all of the recreation areas at Black Canyon and Montour. Currently, Reclamation employs a full-time Recreation Maintenance Worker along with five summer seasonal maintenance workers to maintain the five recreation areas.

Reclamation has previously attempted to transfer management to Gem County Parks for the five recreation areas but has been unable to reach an agreement because Gem County has, to date, been unable to assume the task. After attempts with two concessionaires, it was found that the revenue generated from user fees at Black Canyon Reservoir was not enough to maintain and operate the facilities while generating a profit. There are currently no contracts between Reclamation and any private concessionaire to provide recreation goods or services at the park.

Each year, the Gem County Sheriff's Department has a specific contract with Reclamation to provide law enforcement services in addition to normal services at Reclamation's lands and recreation areas located at the reservoir and Montour. These contracts provide for patrol of recreation areas during the summer season, as well as funds for equipment. Additionally, the Sheriff provides marine patrol service on the reservoir from mid-May to mid-September (Reclamation 2002). The Sheriff is the sole provider of law enforcement on the reservoir and they operate out of Black Canyon Park. Also see Section 3.8.1.4, *Law Enforcement* subsection.

A Cooperative Agreement between Reclamation and the Gem County Waterways Commission provides for the maintenance and management of public recreation facilities, such as docks, boat launches, and swimming, fishing, and picnicking areas on the reservoir. According to the agreement, Reclamation has jurisdiction over and responsibility for managing recreation facilities at the reservoir while the Waterways Commission has the capability to obtain grant funding for facilities as well as the expertise to maintain these facilities (Reclamation 1990). This

agreement extends to the roadside boat ramps, which are frequently referred to as "County Ramps." Also see Section 3.8.1.4, *Agreements* subsection.

An MOU between Reclamation and IDFG provides for cooperation between the agencies in managing Montour WMA (Reclamation 1983). Reclamation has issued letters allowing dog trials to occur at Montour WMA, although no permits have been issued. See Section 3.8.1.4, *Agreements* subsection, for a description of the MOU.

3.7.2 Environmental Consequences

3.7.2.1 Alternative A (No Action Alternative)—Continuation of Existing Management Practices

Implementation of Alternative A would be without the benefit of a management plan resulting in generally negligible impacts to recreation resources in the near future. However, as the natural and recreation resources experience pressure and degradation from increased use over time, the impact of no management plan would likely result in some adverse impacts to recreation resources.

While there is concern that reservoir surface capacity is at or exceeding acceptable levels from a safety standpoint, actions under Alternative A would not likely cause any significant increase in boating or PWC use on the reservoir. As more areas become too shallow for boating, boaters are forced into an ever-smaller reservoir surface area and capacity for general boating uses is decreased.

Specific proposals in Alternative A related to riparian areas, noxious weeds, and water quality and erosion would have an indirect beneficial impact on recreation by improving habitat for wildlife species and thus improving opportunities for consumptive and non-consumptive recreational activities. The implementation of an IPM Plan would have a minor beneficial impact on recreation users by decreasing the nuisance of mosquitoes to some small degree.

Specific proposals in Alternative A related to public safety would have a minor beneficial impact on recreation as they allow for the safe use of land and water for multiple activities. For example, enforcement of the current no-wake zone near the shore line and circular use regulations increase safety on the reservoir by reducing potential conflicts among various watercraft. Public information proposals would also have a minor beneficial impact to recreation by improving the visitor's knowledge of current Reclamation regulations and existing recreation opportunities.

Allowing special events to take place as they currently do could potentially have a minor adverse impact to recreation if the special event results in crowding and/or conflicts with the general public.

Identifying a managing partner for recreation facilities at the reservoir, as proposed in both alternatives, would likely have a beneficial impact to recreation resources if management could be provided that is consistent with Reclamation's goals and objectives for the adequate maintenance of existing recreation resources.

Allowing access to Reclamation lands according to current policies would have a minor beneficial impact to recreation resources, if enforcement resources are adequate, by minimizing potential conflicts between users (e.g., hikers and hunters). A minor beneficial impact to recreation would result from clearly marking the boundary between Montour WMA and private property, which is proposed in both alternatives. This action would establish visible boundaries between different types of activities and thus minimize potential conflicts that often arise when differing activities occur on adjacent parcels of land.

Several proposals in Alternative A address habitat and wildlife within Montour WMA. Maintenance of natural and constructed wetlands and enforcing seasonal area closures for the protection of waterfowl and other bird nesting areas are examples of these proposals. If funding and staff remains adequate, these actions would have an indirect beneficial impact on recreation by improving habitat for wildlife species and thus improving opportunities for consumptive and non-consumptive recreational activities.

Alternative A proposes that use of and access to the campground in Montour WMA, the four parks on the reservoir, and highway County boat ramps continues as is currently allowed. This could potentially have an adverse effect on the recreation experience at and adjacent to these sites. If the demand for recreation resources continues to grow as expected, and the existing facilities are not improved or expanded, these sites could experience the effects of overcrowding resulting in decreased visitor safety and enjoyment. On the other hand, maintaining current facility capacity may have an indirect beneficial effect on the recreation experience by effectively limiting the potential increase in reservoir surface crowding that would likely occur with the development of new use and access areas.

Other reasonably foreseeable impacts on recreation resources include continued regional population growth and a likely increase in visitor use. Specifically, this growth would increase the demand for consumptive and non-consumptive recreation activities. These impacts would be evident more quickly under Alternative A since no expansion of recreation facilities and fewer programs to protect and enhance natural resources are proposed.

Regional population growth will have reasonably foreseeable impacts on recreation resources. Section 3.9, *Socioeconomics*, details population projections for various counties in Southwestern Idaho that are near the reservoir. Projected population figures indicate rapid and continuing growth in this area until at least the year 2025. It is important to note that the population of areas where visitors to the RMP Study Area live is expected to grow at a rate higher than the state as a whole. Specifically, over two-thirds of all visitors to Black Canyon Park were from either Ada or Canyon Counties, whose populations are expected to increase by 39 percent and 35 percent, respectively, by 2015.

Increases in recreation demand can be expected to mirror population growth (Cordell 1999). While population projections are less reliable for determining future demand for specific recreation activities, these figures can be useful in determining future overall recreation participation. With this in mind, future recreation demand in the RMP Study Area can be expected to grow at a rate similar to the population increases of Ada and Canyon Counties, (39 percent and 35 percent, respectively). Such increases in recreation use in the RMP Study

Area are particularly relevant given that capacity for general boating uses is expected to decrease because of continuing reservoir sedimentation.

It should be noted that while social capacity (crowding) is frequently studied in outdoor recreation research, a definitive perceived crowding scale (i.e., a standard measurement, methodology, and point at which a site is considered to have exceeded its social capacity) has yet to be commonly accepted. Social capacity is a complex issue that is influenced by multiple factors including recreation setting (developed versus dispersed), ethnicity, and activity type, among other variables. Additionally, empirical studies have shown that a typical inverse relationship does not always exist between perceived crowding and satisfaction with a recreation experience. That is, as perceived crowding increases, it would be expected that satisfaction decreases; however, that is not always the case (Manning 1999). It is nonetheless important to recognize that specific use areas within the RMP Study Area may have unique social capacity standards based on specific conditions at each site and that user satisfaction will likely decrease at some point in the future.

Mitigation and Residual Impacts (Alternative A)

Mitigation measures are not necessary because no substantial impacts are expected under the No Action Alternative. Residual impacts are discussed above.

3.7.2.2 Alternative B (Preferred Alternative)—Enhancement of Natural and Cultural Values and Maintenance of Recreation Opportunities

Alternative B contains several actions that would maintain current recreational opportunities and provide minimal increased recreation facility capacity. Recreation-related actions under Alternative B would have beneficial effects on recreation; however, recreation facility expansion or significant improvements would only be undertaken if Reclamation entered into an agreement with a non-Federal (public entity) managing partner.

The most significant differences between Alternative B and the No Action Alternative are focused in and around the WMA. Specific actions that may impact recreation resources and opportunities include the following: expanding the WMA boundary, and constructing 25 to 50 additional wetland/pond acres within the WMA (additional wetland/ponds would also be constructed under Alternative A, though the number of acres has not been specified). Recreation resources potentially affected by implementation of Alternative B include various recreation user groups (e.g., non-motorized boaters and hunters), physical space available for recreation activities, and various recreation experience variables such as crowding and level of regulatory enforcement.

Expanding the WMA boundary and constructing 25 to 50 additional wetland/pond acres within the WMA would have a beneficial impact on hunters and anglers by providing more physical space for specific recreation activities and increased wildlife production.

Actions in other resource areas under Alternative B may have both adverse and beneficial effects on recreation, given their emphasis on resource enhancement. Overall wildlife and vegetation management, such as increased residual nesting cover and extended nesting seasonal closures,

would have an indirect beneficial impact on recreation by improving habitat for wildlife species and thus improving opportunities for consumptive and non-consumptive recreational activities.

Additional proposals related to enhancement of habitat and wildlife would be a beneficial impact to recreation by assuring that the goals and objectives of the Montour WMA are more likely to be met. The same is the case for both consumptive and non-consumptive recreation, as well as access proposals related to Montour WMA.

Implementation of a recreation use monitoring program would have a beneficial impact to recreation by assessing recreation carrying capacity so that land management activities can respond to changing demands over time. A recreation use monitoring program would provide data for the development of better management practices to reduce, control, or resolve conflicts and concerns regarding recreation carrying capacity at area parks, Montour WMA, and on the reservoir surface.

Actions related to access under Alternative B would have a beneficial impact to recreation by encouraging users through management strategies to use appropriate lands, particularly at and adjacent to the "County" boat ramps. At all reservoir sites and "County" boat ramps, an MOU with ITD would be used to develop a coordinated approach to safety, and Reclamation would work with the County to enforce no parking areas adjacent to recreation areas and highway boat ramps. These management strategies, however, may have adverse effects on recreation user groups who do not want to pay the fee at Black Canyon Park or want a less formal place to stage their boating activities. Overall, such strategies will enhance the recreation experience by reducing safety hazards and improving traffic circulation. Other access-related actions, such as providing non-motorized trail connections, would have beneficial impacts on recreation by providing an additional formalized recreation opportunity.

Specific actions related to recreation and access at Montour WMA would generally have beneficial effects on non-consumptive and consumptive recreation. Specific monitoring and educational actions would likely foster stewardship and alleviate conflicts among various user groups. Development of a self-guided walking tour and a non-motorized boating access area would have beneficial impacts on recreation by providing additional formalized recreation opportunities. Regulation of motorized access and parking and the provision of signed non-motorized trails would enhance the overall recreation experience by reducing the potential for conflict and safety hazards among user groups. In addition, these access regulations would protect habitat needed for wildlife production, thus maintaining various hunting and fishing opportunities.

Certain RV campers would experience positive effects as a result of upgraded campsites at Montour WMA to accommodate larger RVs proposed under Alternative B. However, special events incompatible with wildlife management goals and objectives would no longer be allowed at the Montour WMA under Alternative B, precluding organized groups from using the area for special events.

Alternative B proposes a number of actions related to consumptive recreation (hunting, fishing, and trapping) at Montour WMA. These management/administrative actions would beneficially affect recreation facilities and opportunities at Montour WMA and enhance user recreation

experience by improving user satisfaction, increasing wildlife production and hunting sites, and alleviating user conflicts.

Other primary differences between Alternative B and the No Action Alternative are focused on increased recreation facility capacity at the reservoir. Alternative B proposes improvement and enhancement of all recreation facilities at the reservoir and places an emphasis on day use and group use areas at several of the parks. Overall, the recreation improvements proposed under Alternative B would likely have beneficial effects on recreation.

Improvements or expanded facilities at Cobblestone Park and improvements at Triangle Park could increase the physical space available for recreation and/or alleviate demand at higher use areas such as Black Canyon Park. Alternative B proposes designating Triangle Park as the main location for hosting special events at the reservoir, which would concentrate use, simplify enforcement, and avoid conflicts with the general public at locations with higher use, such as Black Canyon Park. Improvements or expanded facilities at Wild Rose Park would address existing capacity issues and increase bank fishing opportunities at the reservoir.

Actions proposed at Black Canyon Park under Alternative B will likely have beneficial effects by providing new recreation facilities (an accessible fishing pier) and accommodating increased day use and group-related activities by expanding the recreation area to the east. These actions, however, may have adverse effects on some recreation user groups if, at some point, providing additional boating capacity results in unacceptable crowding conditions on the reservoir.

The impact of regional population growth on recreation resources discussed under Alternative A would be less evident under Alternative B given that actions to provide additional recreation facility capacity and to enhance recreation user experience and satisfaction are proposed. However, this would only be the case if Reclamation enters into an agreement with a non-Federal public entity managing partner, thereby shifting management of recreational resources to another entity.

Mitigation and Residual Impacts (Alternative B)

Mitigation measures are not necessary because no substantial impacts are expected under Alternative B. Residual impacts are discussed above.

3.8 Land Use

3.8.1 Affected Environment

3.8.1.1 General Land Use Patterns

Ownership

The U.S., through Reclamation, owns Black Canyon Reservoir and a significant portion of the land immediately adjacent to the reservoir. The U.S., through BLM, owns land adjacent to the RMP Study Area boundary on both the north and south sides of the reservoir. The remainder of the land in the vicinity of the reservoir, both on the north and south sides of the reservoir, is privately owned. Privately owned parcels in this area are typically large in size and are used primarily for grazing and agricultural purposes. A 3,232-acre development is being proposed on the south side of the reservoir opposite Triangle Park. The phased development plan includes two 18-hole golf courses, a multipurpose equestrian center, home sites, public marina and boat docks, clubhouse and facilities, trails, condominiums, and commercial development consisting of a post office, fire station, ambulance, and small retail shops.

Idaho Northern and Pacific Railroad, a subsidiary of Rio Grande Pacific Corporation, owns a 100-foot wide right-of-way containing train tracks on the south side of the reservoir. It bisects Reclamation lands, as well as privately owned lands. The railroad has been on the south side of the Payette River since the late 1800s and was used for transporting timber and mineral resources out of the mountains as one of the former Union Pacific branch lines. The railroad is no longer being used for this purpose. However, the Thunder Mountain Line, a company that currently provides scenic and theme-related train rides between Horseshoe Bend and Cascade, started service in 2002 on a segment between Horseshoe Bend and Emmett with stops at Black Canyon Dam (adjacent to Cobblestone Park) and Montour WMA.

Study Area Zoning

Black Canyon Reservoir and Reclamation lands within the RMP Study Area boundary are located within an area designated by the Gem County Comprehensive Plan (1995) Chapter 4-Zoning Uses as either A1 Prime Agriculture or A3 Rural Agriculture. The transition from one zone use to another occurs at a line (Boise Meridian) running precisely north to south in the vicinity of Triangle Park. To the west of the Boise Meridian line Reclamation and surrounding private lands are designated as A1 Prime Agriculture. The intent of the A1 Prime Agricultural zone is to keep lands free from urban development in order to protect them for agricultural or grazing purposes. There is a 40-acre minimum lot size. To the east of the Boise Meridian line Reclamation and surrounding private lands are designated as A3 Rural Agriculture. There is a 5-acre minimum lot size specified in this zone designation.

The Gem County/City of Emmett Comprehensive Plan (1995) designates the Payette River as a "working river" and recognizes agricultural, energy production, and recreation uses associated with the river. The Payette River has also been categorized as a "Hazardous Area" by the plan, as well as the Black Canyon Dam and Reservoir. Hazardous Areas are those which pose safety threats and are either natural or manmade. High voltage electrical transmission facilities are considered a "Major Hazardous Area," which is considered unsuitable for urban density type

development and concentrated human presence without safeguards. Gem County may limit development in these areas (Gem County/City of Emmett Comprehensive Plan 1995).

3.8.1.2 Easements

In addition to managing U.S. land, Reclamation uses or encumbers other privately owned properties along the reservoir through the mechanism of acquired flowage, access, or other easements.

Flowage easements

Five flowage easements totaling approximately 505 acres were obtained from four different private landowners for land adjacent to the reservoir. The lands involved in flowage easements are still privately owned although Reclamation has acquired rights over these lands whereby Reclamation is allowed to flood them as needed. Two flowage easements were obtained from the same private landowner and are located on the south shore of the reservoir across from Triangle Park. Only a narrow strip of the Idaho Northern & Pacific Railroad right-of-way separates these two flowage easements totaling 169 acres. A third small flowage easement (approximately 1 acre) is located south of these where two intermittent streams flow into the reservoir. The fourth and fifth flowage easements, each from a different private landowner, are located on the north side of the reservoir southeast of Squaw Creek. They are approximately 235 and 100 acres in size, respectively.

Access Easements

Reclamation has one access easement with a private landowner for a gauging station. The 1.8 acre easement is located on the north side of the Payette River immediately west of Wild Rose Park and downstream of the dam. Land involved in the access easement is still privately owned although Reclamation has acquired rights over this land whereby Reclamation is allowed to use it for specific purposes.

Other Easements

Reclamation has an 1890 Right-of-Way (ROW) easement that extends for approximately 2 miles and includes approximately 24 acres along the east side of the Black Canyon Canal. According to United States Code Title 43, Chapter 22, Section 945, "in all patents for lands taken up after August 30, 1890, under any of the land laws of the United States or on entries or claims validated by this Act, west of the one hundredth meridian, it shall be expressed that there is reserved from the lands in said patent described a right of way thereon for ditches or canals constructed by the authority of the United States (Cornell Law School 2002). Reclamation exercised that reserved right on this segment of the Black Canyon Canal.

There are no known power line easements on Reclamation lands at Black Canyon Reservoir. However, large overhead power lines cross the reservoir east of Black Canyon Park that are owned by Idaho Power. No easement documentation related to these power lines exists. It is likely that the Federal Energy Regulatory Commission (FERC), the independent regulatory agency within the U.S. Department of Energy, used their jurisdictional authority to place them there because it is federally owned land.

3.8.1.3 Leases

Agricultural and/or Grazing Leases

Reclamation also leases U.S. land around the Black Canyon Reservoir for agricultural and grazing purposes. There are currently four grazing leases, two agricultural leases, and two agricultural/grazing leases (both uses may occur) totaling approximately 928 acres. These leases were established between 1999 and 2002 with the term of the lease ending the end of the calendar year the lease was established. However, the lessee has the option to extend the lease each year, but only for four more years after the original year of the lease. For example, leases signed in 2002 are valid through December 31, 2002; however, the lessee has the option to extend the lease each year, for a length of one year, through 2006.

Lands leased for grazing purposes only are located throughout the RMP Study Area. Land in the Little lease (Contract No. 2-07-11-L1769) is centrally located on the north side of the reservoir and is approximately 75 acres. Land in the McDonough lease (Contract No. 2-07-11-L1465) is located on the north side of the Payette River and Montour WMA at the east end of the RMP Study Area and is approximately 21 acres. Land in the Stanley lease (Contract No. 1-07-11-L1652) is located on the north side and western half of the reservoir in two separate parcels, one near Black Canyon Dam, the other between Black Canyon Park and Triangle Park, totaling approximately 283 acres. Land in the MacGregor lease (Contract No. 0-07-11-L1657) is located on several parcels along the south side and western half of the reservoir totaling approximately 227 acres. A fifth lease (McConnel, Contract No. 1-07-11-L1684), which was renewed in 2002, was for lands (approximately 308 acres) located on the south side of the reservoir west of the Montour WMA. In total, Reclamation leases more than 600 acres of its land at Black Canyon Reservoir for grazing purposes. Grazing leases specify the cow-calf pairs of animal unit months (AUMs) allowed on each parcel leased (ranging from 10 AUM to 42 AUM) and the dates that grazing is permitted (typically April 1 through June 15 and September 1 through October 30). The land is not to be plowed or used for agricultural purposes without approval, access is permitted by U.S. employees or contractors associated with the operation of the Black Canyon Dam and Reservoir, and hunting and fishing by the public can not be restricted by the lessee.

Lands leased for agricultural purposes only are located in the Montour WMA. This is the Gatfield Farms lease (Contract No. 0-07-11-L1656), which is two parcels of approximately 68 acres. In total, Reclamation leases more than 84 acres of its land at Montour WMA for agricultural purposes only. The land is not to be used for grazing purposes without approval, access is permitted by U.S. employees or contractors associated with the operation of the Black Canyon Dam and Reservoir, and hunting and fishing by the public can not be restricted by the lessee. Specifications in the Gatfield Farms lease, which is an agriculture/wildlife lease, detail the crop to be planted, the size of field for each crop to be planted, and a schedule for annual rotation of the crops. For example, while some fields can be planted at the discretion of the lessee (36 total acres), others fields are required to be planted with ear corn and annually rotated in order to provide food and cover for wildlife (32 total acres).

Lands leased for grazing/agricultural purposes (both may occur) are located in the Montour area. The first lease is the Hadley lease (Contract No. 0-07-11-L1529) which is several parcels totaling approximately 230 acres. The second lease is the Keller lease (Contract No. 2-07-11-L1529) which is approximately 14 acres. In total, Reclamation leases more than 244 acres of its land at

Black Canyon Reservoir for agricultural/grazing purposes. Specifications in these leases also detail the crop to be planted, the size of field for each crop to be planted, a schedule for annual rotation of the crops, the number of animals allowed to graze on each parcel, and the time of year they are permitted to graze. The Hadley lease allows 185 acres to be used for grazing (May 1 to September 30 only with no more than 175 AUMs permitted during this period) and 45 acres to be used for agriculture (22 acres as annually rotated corn for wildlife and 23 acres to be planted at the discretion of the lessee). No grazing is to occur in the agriculture parcel at any time. The Keller lease allows the lessee to plant alfalfa and/or small grains. If alfalfa is planted the first cutting must occur after pheasant season nesting is completed and eight inches must be left standing for winter cover. If small grains are planted, 20 percent of the crop must be left standing for wildlife feed and cover.

3.8.1.4 Other Agreements, Contracts, and Permits

Fish and Wildlife

An MOU between Reclamation and IDFG was established in 1983 to provide for cooperation between the agencies in implementing the Montour WMA Management Plan (Reclamation 1983) and managing the Montour WMA. In general, Reclamation, with overall management responsibility, is responsible for completing upland and waterfowl habitat developments as specified in the plan while consulting with IDFG on all matters pertaining to fish and wildlife. IDFG is responsible for providing Reclamation with information and technical assistance during implementation of the fish and wildlife activities provided for in the plan, for enforcing all State of Idaho fish and game laws, and for enforcing wildlife related closures at Montour. IDFG may also initiate and implement enhancement activities outlined in the plan with the approval of Reclamation.

Reclamation and IDFG have jointly reviewed an annual proposal to have a dog trial at the Montour WMA. Reclamation has provided a letter of approval and IDFG has issued a permit authorizing the dog trial. The dog trial has taken place after the nesting season and has been compatible with WMA management goals and objectives.

Concessions

In the mid-1990s, a private concessionaire managed and maintained the five recreation areas for one year but the contract was not renewed for a second year because the concessionaire could not make it financially viable. When management of the recreation areas was put out to bid the next year, a grounds maintenance contractor was contracted to maintain the parks and collect fees. This contract was not renewed at the end of the year. Since then, Reclamation has managed and maintained the recreation areas itself as described in Section 3.7, *Recreation*. It is estimated that the revenue generated from user fees at Black Canyon Reservoir is generally not enough to maintain and operate the facilities and generate a profit. There are currently no contracts between Reclamation and any private concessionaire to provide recreation goods or services at any recreation area.

Noxious Weeds

A cooperative agreement exists between Reclamation and Gem County Weed Control to manage noxious weed species at Black Canyon Reservoir. Canada thistle and Poison hemlock are the most significant noxious weed species found at Black Canyon Reservoir and Montour WMA.

Other noxious weeds include yellowstar thistle, Russian knapweed, spotted knapweed, Scotch thistle, purple loosestrife, Eurasion watermilfoil, and perennial pepperweed (see Section 3.3, *Vegetation*). Reclamation pays Gem County Weed Control $7,500 annually for noxious weed management. The Montour/Black Canyon Noxious Weed Control Plan (2002) prioritizes strategies based on the species of concern, the size of the population, and the likelihood of success in controlling the species. The strategies specify the location of the infestation, the herbicide to be used for treatment of each species, the application rate, the time of year to treat, and alternative herbicides for water-sensitive areas. Reclamation may require Gem County Weed Control to use, or refrain from using, certain herbicides in treatment of noxious weeds.

Law Enforcement

Gem County Sheriff is the sole provider of law enforcement in the vicinity of the reservoir, at Black Canyon Reservoir recreation facilities, and on the reservoir. The Sheriff has a specific contract with Reclamation to provide law enforcement at recreation facilities between mid-May and mid-September each year. The contract provides for patrol of these recreation areas for a total of 160 hours (10 hours per week) during the peak season. The contract is updated annually to provide for the necessary services. A wide range of disturbances at the reservoir's recreation areas requires Sheriff response. These disturbances typically include vandalism, theft, battery, domestic violence, discharging firearms, and alcohol-related misconduct. In the vicinity of the reservoir, Sheriff response is typically related to vehicle accidents. The response time from the Sheriff's headquarters in Emmett ranges from 5 minutes to 15 minutes depending whether the location is the dam or Montour WMA, respectively. Park hosts are present at some of the recreation areas during peak season operating hours. Hosts are unable to cite visitors for park violations but communicate with the Sheriff to minimize potential disturbances or to facilitate the handling of those that do occur.

The Sheriff also provides marine patrol service on the reservoir from mid-May through mid-September. IDPR funds half of this service through their boat license fees while Gem County funds the other half. One Sheriff's officer provides weekday patrol while a second provides weekend patrol for a total of 60 hours a week during the peak season. The Sheriff operates out of Black Canyon Park. Equipment used by the Sheriff's marine patrol consists of one jet boat and two PWC. This equipment is pulled out of the reservoir each day and brought back to Sheriff's headquarters in Emmett. Activities of the Sheriff's marine patrol include boat inspections, emergency response, righting capsized vessels, towing disabled vessels, removing hazards in the water, and enforcing laws.

Sedimentation in the upper part of the reservoir has caused it to become shallow and difficult to navigate safely; therefore, boat use is more concentrated on the western two-thirds of the reservoir. Additionally, the reservoir is narrow and becomes quite crowded on weekends and holidays during the peak season. The actual level of boater conflict on the reservoir is characterized as low but the potential for future conflict continues to increase as the number of boats and PWC on the reservoir increase. Activities most popular on the reservoir include power boating, waterskiing, and PWC use. The most significant potential conflict exists between boats and the PWC that follow boats closely in order to jump their wake. There are no speed restrictions on the reservoir; however boat use must occur in a directional (clock-wise) manner.

Fire Protection

Fire suppression at the reservoir has been provided by Gem County Fire District 1 and Gem County Fire District 2 and has typically been in response to boat, vehicle, trash, or grass fires.

District 1 headquarters are based in Emmett and the district is located west of the reservoir in the Emmett Valley, its eastern boundary near the top of the dam. District 1 personnel include a volunteer chief and 22 volunteer firefighters. Equipment includes nine trucks, including grass trucks, pumpers, and tankers with a total capacity of approximately 9,000 gallons. Response time to the dam, which is 7 miles from District 1 headquarters in Emmett, is approximately 10 to 15 minutes (Personal Communication, Bill Lee, District 1 Fire Chief, July 2002).

District 2 headquarters are based in Sweet, and the district is located northeast of the reservoir in the Sweet Valley. Its southwestern boundary is near Triangle Park. District 2 personnel include a volunteer chief and 17 volunteer firefighters. Ten additional volunteer firefighters are available through mutual aid agreements. District 2 maintains mutual aid agreements with BLM, State of Idaho, Gem County District 1, and Horseshoe Bend Fire District. Equipment includes several trucks, including 2 heavy brush rigs, 2 light brush rigs, a tender with 3,300 gallon capacity, and a pumper. The district received a new truck (750-gallon pumper) in 2002 that is foam-compatible (20-gallon tank) and can pump 1,000 gallons of water per minute (Personal Communication, Bill Lee, District 1 Fire Chief, 2004). Response time to Triangle Park (the western extent of their jurisdiction), which is 7 miles from District 2 headquarters in Sweet, is approximately 17 to 20 minutes. Response time to Montour WMA, which is 4 miles from Sweet, is approximately 12 to 15 minutes. During the past several years, District 2 has responded to four or five calls at Black Canyon Reservoir and Montour WMA each year. Response is primarily for wildfires with the occasional vehicle fire (Personal Communication, Jim Buffington, District 2 Fire Chief, September 2002).

Neither fire district has jurisdiction between the Black Canyon Dam and Triangle Park, although both Fire Districts 1 and 2 will respond to fires in this area, as well as any fires near the reservoir.

Both fire districts are volunteer operations with mutual aid agreements with the BLM. The agreements provide for mutual assistance between them to adequately respond to wildfire incidents. The nearest BLM personnel and equipment are located in Boise. The agreements provide for the nearest party to the agreement to respond upon request. In the case of a wildfire incident, the Incident Command System is utilized to facilitate a cooperative effort among agencies and applicable jurisdictions to suppress the wildfire (BLM 1997). The Mutual Fire Protection and Disaster Agreement is to be supplemented annually by an operating plan between the parties.

Reclamation and BLM—Idaho have a Wildland Fire Suppression Agreement that authorizes BLM to provide wildland fire suppression activities on certain withdrawn and acquired lands under Reclamation's jurisdiction in the region. Whether Reclamation project lands at Black Canyon Reservoir and Montour are included in this agreement is being clarified by Reclamation.

Recreation Facilities Maintenance

A Cooperative Agreement was established March 29, 1990 between Reclamation and the Gem County Waterways Commission (Contract No. 0-07-11-l0713) to improve the maintenance and

management of public recreation facilities, such as docks and boat launches on the reservoir. According to the agreement, Reclamation has jurisdiction over and responsibility for managing recreation facilities at the reservoir while the Waterways Commission has the capability to obtain grant funding for facilities as well as the expertise to maintain these facilities (Reclamation 1990). For example, in 1992 Reclamation requested 45 docks from the Waterways Commission to be delivered in the spring of 1993. Ownership of facilities, which have been funded through the Waterways Commission and given to Reclamation, is unclear, but will be determined and documented. The roadside boat ramps are frequently referred to as "County Ramps" and signs at these sites bear the logos of both agencies. Reclamation rebuilt docks adjacent to these ramps in 2001. The Gem County Sheriff has correctly operated on the assumption that Reclamation is responsible for maintaining these ramps. Reclamation has correctly operated on the assumption that Gem County is responsible for law enforcement, as well as assistance in placing docks at these and other locations around the reservoir.

Other

Western Idaho Powwow held a recreation permit issued by Reclamation in July 1995 that was terminated in April 2002. The recreation permit allowed them to host a 3-day powwow at Montour WMA each July. However, after several notices, the permit was terminated because of non-compliance with the terms and conditions of the contract.

The United States purchased the Palmer House when acquiring the townsite of Montour. Reclamation has an agreement with the current resident (as of January 2004) of the Palmer House wherein they are allowed to use the house as a residence. Once the house is vacated by that individual, this agreement will not be extended to any other party and all personal belongings will be removed from the premises.

3.8.2 Environmental Consequences

3.8.2.1 Alternative A (No Action Alternative)—Continuation of Existing Management Practices

Implementation of Alternative A would be without the benefit of a current management plan resulting in generally negligible impacts to land uses in the near future. However, as the cultural, natural, and recreation resources experience pressure from increased use of the reservoir over time, the impact of not having a current management plan would result in an adverse impact to land use by not providing long-term comprehensive guidance and direction on land uses in the RMP Study Area.

Specific proposals in Alternative A related to riparian areas, noxious weeds, and water quality and erosion would have an indirect beneficial impact on land use by improving habitat for wildlife species and thus improving uses of the land for consumptive and non-consumptive activities.

Specific proposals in Alternative A related to public safety would have a minor beneficial impact on land use as it allows for the safe use of land and water for multiple activities. For example, enforcement of the current no-wake zone near the shoreline and the no-shooting zone surrounding Montour campground allow for multiple activities to occur in the same general area. Public information proposals would also have a minor beneficial impact to land use by

improving the visitor's knowledge of current land use and how their activities are potentially detrimental to or supportive of resources on that land.

In Alternative A, special events would be allowed under the current permit/reservation system, which could potentially have a minor adverse impact to land use if the special event has a detrimental effect on the natural, cultural, or recreation resources of that area. If overuse, crowding, or inadequate facilities occur at sites hosting special events, dispersed use could potentially result and have an adverse effect on land use.

Identifying a managing partner for recreation facilities at the reservoir, as proposed in both alternatives, would have a minor beneficial impact to land use if management were consistent with Reclamation's goals and objectives for the protection of both natural and recreation resources at the reservoir. Beneficial impacts to land use would also result from the managing partner's adequate maintenance and enforcement associated with these recreation facilities.

Allowing access to Reclamation lands according to current policies would impact land use relative to the current situation if enforcement resources are adequate. If these resources become limited, lack of enforcement would result in adverse impacts to land use as a result of dispersed use, increased susceptibility to wildfire, increased noxious weed infestations, and potential conflicts between users.

Alternative A proposes that use of and access to the campground in Montour WMA, the four parks on the reservoir, and highway "County" boat ramps continues as is currently allowed. This could potentially have an adverse effect on land use at and adjacent to these sites as recreation use continues to grow. If recreation use corresponds to population growth, which is projected to grow 67, 57, and 27 percent for Ada, Canyon, and Gem counties, respectively, by 2025, the demand for recreation facilities will significantly increase. If the demand for recreation resources continues to increase as expected, and the existing facilities are not improved or expanded, these sites could experience the effects of overcrowding, resulting in dispersed use. For example, if existing boat ramps are not improved to make it easier and safer for users to access the reservoir, other shoreline locations might be used, resulting in indirect adverse impacts to land use that includes habitat destruction, erosion, sanitation problems, decreased public safety, and cultural resource destruction.

A minor beneficial impact to land use would result from clearly marking the boundary between Montour WMA and private property, which is proposed in both alternatives. This action would decrease the likelihood of confusion over property boundary locations, establish visible boundaries between different types of activities, and thus minimize potential conflicts that often arise when differing activities occur on adjacent parcels of land.

Several proposals in Alternative A address habitat and wildlife within the Montour WMA. Maintenance of natural and constructed wetlands and management of nesting cover for the production of waterfowl are examples of these proposals. If funding and staff for these actions remains adequate, the impact to land use would be beneficial. However, if funding and staff are not available, the impact to land use could become negative over time. If the quality of natural resources were to decline at the WMA, it is likely that the goals and objectives of the WMA would be compromised. In addition, proposals related to access and consumptive recreation

within the Montour WMA would have a negligible impact on land use as long as enforcement related to these topics was adequate.

Alternative A proposes the continuation of agricultural leases for habitat values, which would be a beneficial impact to land use as long as the specifications for proper crop management and leaving food plots unharvested, which are contained within each lease, are followed.

Mitigation and Residual Impacts (Alternative A)

Mitigation measures are not necessary because no substantial impacts are expected under Alternative A. Residual impacts to land use could result from there not being a management plan particularly if funding, staff, and resources diminish in the long-term.

3.8.2.2 Alternative B (Preferred Alternative)—Enhancement of Natural and Cultural Resource Values and Maintenance of Recreational Opportunities

Alternative B contains several proposals that would protect existing natural, cultural, and recreation resources thereby reducing the potential for adverse impacts associated with conflicts among various users and land uses. The proposals that were previously discussed under Alternative A, and that would have a negligible or beneficial impact on land use, are also part of Alternative B. For Alternative B, however, there are additional proposals that go beyond each of the proposals in Alternative A in order to protect natural, cultural, and recreation resources at the reservoir. The following proposals from Alternative B are examples that highlight the beneficial impacts to land use that are not incorporated as part of Alternative A.

Cooperation among Reclamation, other applicable agencies, and adjacent private landowners for the establishment of BMPs for offsite (non-Reclamation land) activities would result in beneficial impacts to land use by avoiding indirect impacts to land use such as erosion, sedimentation, and decreased water quality. However, it is unlikely that other applicable agencies and adjacent private landowners would participate in this process unless incentives could be identified for them to establish BMPs related to activities on land they manage or own. If these incentives can not be identified, it is likely that no BMPs will be established for non-Reclamation lands resulting in no impacts to land use relative to the current situation.

In contrast to Alternative A, Alternative B proposes designating Triangle Park as the main location for hosting special events at the reservoir, which would concentrate use, simplify enforcement, and discourage dispersed use. Montour WMA would no longer be used for special events unless they are compatible with wildlife management goals and objectives.

As described in Alternative A, population growth will increase recreation demand. If the demand for recreation resources continues to increase as expected, and the existing facilities are adequately improved or expanded as proposed in Alternative B, these sites should be able to accommodate this increased demand. If not, the scenario described in Alternative A is more likely. It must be noted, however, that without a non-Federal public entity as a managing partner, Reclamation would have no authority to develop new recreation facilities or enhance existing facilities. Only operation, maintenance, and replacement of existing facilities would be authorized.

Development and implementation of an interpretation program that, among other things, illustrates current land uses would benefit land use by improving the visitor's knowledge about how their activities might be potentially detrimental to or supportive of resources associated with that land.

Implementation of a recreation use monitoring program would have a beneficial impact to land use by assessing how land is being used so that land management activities can respond to changing demands over time.

Proposals related to access under Alternative B would have a beneficial impact to land use by directing users to appropriate places, encouraging them through management strategies to use appropriate lands, and decreasing the potential for incidents such as wildfire that could have a detrimental effect on land use.

Expansion of the Montour WMA boundary would have a beneficial impact on land use by placing additional land under management of the IDFG for protection and enhancement of wildlife habitat and for provision of a variety of recreational experiences compatible with the goals of the WMA.

Proposals related to agricultural and grazing leases within Montour WMA would be a beneficial impact to land use by improving habitat values, relative to their current condition, as determined by IDFG so that WMA goals and objectives are met.

Additional proposals related to enhancement of habitat and wildlife would be a beneficial impact to land use by assuring that the goals and objectives of the Montour WMA are more likely to be met. The same is the case for both consumptive and non-consumptive recreation, as well as access proposals related to Montour WMA.

Alternative B proposes improvement and enhancement of all recreation facilities at the reservoir and places an emphasis on day use and group use areas at several of the parks. This would have an adverse effect on land use only if the improvement and expansion of these facilities could not meet the growing demand for recreation facilities, which is unlikely, resulting in dispersed use around the reservoir. The fact that the proposed expansion would only occur at existing sites would be a minor beneficial impact to land use by concentrating this particular use to land it is already occurring on. This is particularly true at boat launch sites. Improvement of these facilities would discourage dispersed use of the shoreline by providing an organized and safe mechanism to access the reservoir.

Mitigation and Residual Impacts (Alternative B)

Mitigation measures are not necessary because no substantial impacts are expected under Alternative B.

3.9 Socioeconomics

3.9.1 Affected Environment

Current population trends, employment, and income for Gem County and nearby Ada, Canyon, and Payette counties are discussed below. Ada County, which contains the city of Boise and neighboring suburban communities, has a large population and thus a significant impact on use of Black Canyon Reservoir, particularly for recreation.

3.9.1.1 Demographic Profile

The closest city to Black Canyon Reservoir is Emmett (population 5,490), the county seat of Gem County (U.S. Census Bureau 2000). Nearly one third of Gem County's population resides in Emmett making it the county's largest city. During the 1990s, Gem County's population grew 28.2 percent, reaching 15,181 in 2000. In 2000, 63.8 percent of the Gem County population was classified as rural, a slight increase since 1980.

Idaho's population growth rate from 1990 to 2000 was an increase of 28.5 percent, while the United States' total population growth rate was 13.1 percent. Most of the population in southwest Idaho is located south of Gem County along the Interstate 84 corridor in cities such as Boise, Nampa, and the surrounding suburbs. Ada and Canyon counties have several large cities such as Boise (population 185,787), Nampa (population 51,867), Meridian (population 34,919), and Caldwell (population 25,967). The population of nearby Ada County grew 46.2 percent, reaching 300,904 in 2000.

Table 3.9-1 shows the age distribution of residents in Gem County, surrounding counties, and the State of Idaho for 2000. For the most part, the population distribution and categorical shifts in Gem County resemble that of the state and the country. However, the population of the county and state is growing at a quicker pace than that of the U.S. overall and there is a greater percentage of people over 65 years old in Gem County than elsewhere.

TABLE 3.9-1
Gem County and State of Idaho Age Distribution

County	2000 Population	Change Since 1990 (%)	People Under 5 Years of Age (%)	People Under 18 Years of Age (%)	People Over 65 Years of Age (%)
Gem	15,181	28.2	7.0	28.0	15.6
Ada	300,904	46.2	7.7	27.3	9.1
Canyon	131,441	45.9	9.1	30.9	11.0
Payette	20,578	25.2	7.6	30.6	13.2
Idaho	1,293,953	28.5	7.5	28.5	11.3
United States	281,400,000	13.1	6.8	25.7	12.4

Source: U.S. Census 2000

According to the U.S. Census Bureau, the population of the State of Idaho between 1990 to 2000 grew from 1,006,749 to 1,293,953, an increase of 287,204 people (28.5 percent). Between 2001 and 2002, the population of Idaho was estimated to have grown 1.6 percent compared to a 1.1 percent national average, making Idaho the ninth fastest growing state in the country during that period.

Projected population growth at the state level is done by the U.S. Census Bureau. The population growth projection for Idaho from 2000 through 2025 is listed in the Table 3.9-2.

TABLE 3.9-2
U.S. Census Bureau State Population Projection

State	2000 Population	2025 Population	Population Change (2000-2025)	Percent Change (2000-2025)
Idaho	1,293,953	1,739,000	445,047	34%

Source: U.S. Census Bureau

Until 1992, the U.S. Department of Commerce, Bureau of Economic Analysis, has made estimates of future population at the county level for each state. Each state is now responsible for determining their projections and there is great diversity in methods and results from state to state. Several states, including Idaho, do not have population projections available on the web although the USFS has developed tables for the web and public use. Table 3.9-3 provides county population projections based on USFS analysis of population data.

TABLE 3.9-3
County and State Population Projections

County/State	2000 Population	2015 Population	Population Change (2000-2015)	Percent Change (2000-2015)
Ada	292,609	405,968	113,359	39%
Canyon	128,580	173,547	44,967	35%
Gem	15,326	17,824	2,498	16%
Idaho	1,273,855	1,609,314	335,459	26%

Source: USFS website (http://www.fs.fed.us/r1/planning/econ/easy/info-un/pop-growth.html) with data provided from the Idaho Department of Commerce.

These projections indicate significant population growth in the state. Other entities, such as The Federation for American Immigration Reform (FAIR), have projected a state population as high as 2,422,000 in 2025, an increase of 87 percent above the state's population in 2000.

The county population growth projection data indicate that there will be significant growth in Ada County, likely associated with the growth of the Boise metropolitan area. More rural counties, such as Canyon and Gem, will also experience population growth according to the

projections, although less than neighboring Ada County. In the case of Gem County, growth is projected to be less than that of the state as a whole, although still 27 percent.

3.9.1.2 Economic Setting

Emmett is located in the "Valley of Plenty," made possible by the development of an irrigation canal system that has diverted water from the Payette River and Black Canyon Reservoir since the late 1800s when the valley began to be settled. In the early 1900s the irrigation canal system continued to be expanded and by the 1920s, the valley was producing an abundance of orchard fruit, specifically cherries and apples. After an economic decline brought on by the Great Depression and years of exceptional drought in the 1930s and 1940s, the economy rebounded in the 1950s. Since then, the economy has been based on agriculture, timber, and mining, each benefiting from technological advances and providing for a growing post-World War II population.

More recently, however, the economy in the area has begun to diversify by shifting from resource-based manufacturing to government, services, and wholesale and retail trade. Gem County experienced a gain in population since 1990 but did not receive an equal gain in economic benefit during this time. This is due to an increasing number of Gem County residents who choose to commute out of the county to work and shop (primarily in Ada County, where Boise and its suburbs are located). Both the number of persons in the workforce and opportunities for employment increased from 1990 to 2000. The Civilian Labor Force of Gem County increased 19.0 percent during that period while Nonfarm Payroll Jobs in the county increased 29.7 percent. Between 1990 and 2000 the largest increase in the number of jobs in Gem County were in services and wholesale and retail trade. The largest growth rate (200.8 percent) in the county was in mining and construction during this same period (Idaho Department of Labor 2002).

Agriculture and timber resource products are the two basic local industries, and the timber industry formerly provided the bulk of family-wage jobs. However, the timber industry declined because of a lack of a steady supply of logs. As a result, the county's largest employer, Boise Cascade, closed its Emmett mill. The mill later burned in an accidental fire. The amount of land devoted to fruit cultivation has decreased in the Emmett Valley because acreage formerly used for crops is now being utilized for housing and commercial development (Idaho Department of Labor). Between 1987 and 1997 the number of farms actually increased from 539 to 552 but the average acreage of those farms decreased from 414 acres to 331 acres (Idaho Department of Commerce 2000).

In 2000, the median age of persons in Gem County was 37.5 years, up from 36.0 years in 1990 and 31.4 years in 1980. There were 5,539 households in Gem County with an average of 2.7 persons per household in 2000. The 1997 median household income of Gem County was $30,132, which was below the statewide median household income of $33,612. The percentage of county residents below the poverty level (15.4 percent) was higher than the percent of state residents (13.0 percent) below the poverty level (U.S. Census 2000). In 1990, 70 percent of Gem County residents over 25 years of age were high school graduates and 9 percent had at least a bachelor's degree. By comparison, 80 percent of all Idaho residents over 25 years of age were high school graduates and 18 percent had at least a bachelor's degree. In 1990, 95 percent of

Gem County's population was white and 5 percent was Hispanic (Gem County/City of Emmett Comprehensive Plan 1995).

In contrast to Gem County, there were 113,408 households in nearby Ada County with an average of 2.6 persons per household. The 1997 median household income of Ada County was $43,321, which was significantly higher than the statewide median household income of $33,612. The percentage of county residents below the poverty level (8.9 percent) was significantly lower than the percent of state residents (13.0 percent) below the poverty level (U.S. Census 2000).

3.9.2 Environmental Consequences

3.9.2.1 Alternative A (No Action Alternative)—Continuation of Existing Management Practices

In general, impacts to socioeconomics would be negligible under Alternative A. However, if projected population growth and corresponding recreation use is realized, it could have a minor beneficial impact to the local community, particularly for the town of Emmett, and to a lesser degree to other parts of Gem County. A visitor origin study conducted in 2002 (refer to Section 3.7, *Recreation*) indicate that most visitors to Black Canyon Reservoir are from Ada County (46 percent), home of the rapidly growing Boise metropolitan area, which is projected to grow 39 percent by 2015. These visitors likely pass through the town of Emmett to or from their final destination and likely require goods and services that are provided in Emmett. Population growth and correspondingly increased recreation use may therefore have a minor beneficial impact on the surrounding area due to increased expenditures by visitors passing through Emmett.

Cultural and natural resource proposals in Alternative A could potentially create minor, short-term employment opportunities that could result in a negligible beneficial impact to the local economy. Development and implementation of an IPM Plan, protection of riparian areas, and compliance with cultural resource regulations are examples of these types of proposals. These proposed programs propose some degree of maintenance, protection, or enhancement of natural or cultural resources that would require particular services potentially resulting in minor income generated within the local economy.

Mitigation and Residual Impacts (Alternative A)

No mitigation measures are proposed since Alternative A is not expected to directly affect local population or income to a substantial degree. No significant residual impacts related to socioeconomics are identified for Alternative A.

3.9.2.2 Alternative B (Preferred Alternative)—Enhancement of Natural and Cultural Resource Values and Maintenance of Recreational Opportunities

In general, impacts to socioeconomics would be minor under Alternative B. The implementation of proposals identified in Alternative B may provide some minor additional employment opportunities in the local community by potentially increasing park staff and outside support service needs. Additionally, improvements to the park's recreation and wildlife habitat resources would likely increase the amenity value of Black Canyon Reservoir and Montour WMA, making

the area more desirable; however, this increase in amenities would not likely result in any measurable changes to the local socioeconomic conditions. In comparison, the degree of proposed improvements for existing cultural, natural, and recreation resources and for the provision for public safety is greater in Alternative B than in Alternative A. Thus overall, Alternative B would likely provide a slightly greater beneficial impact on the local economy although it is difficult to accurately project a correlation between the two alternatives and any substantial differences in local economics.

Specifically, improvement and expansion of existing recreation facilities, as proposed in Alternative B, would generate additional funds from parking fees, group picnic reservation fees, and special event fees. Recreation facility improvement and expansion would also likely result in an increase of use, putting additional pressure on existing resource managers as well as local enforcement and emergency service providers. A likely increase in use would require additional park staff and adequate agreements with partners such as Gem County Waterways, Gem County Sheriff Marine Patrol, Gem County Sheriff's Department, Gem County Fire Department, and IDFG.

As discussed previously under Alternative A, if projected population growth and corresponding recreation use is realized, it would have a minor beneficial impact to the local community, particularly for the town of Emmett and Gem County.

In comparison to Alternative A, Alternative B has additional proposals such as implementation of an erosion control program, establishment of BMPs for water quality and erosion control during construction, development and implementation of an interpretive program, agreements with the City of Emmett, Gem County, ITD, BLM, and Irrigation Districts regarding provision of adequate access management, and coordination with local ditch companies to maintain and improve habitat values along irrigation ditches. These proposed programs may be additional, yet limited sources for employment opportunities that may be a minor beneficial impact to the local economy.

Based on the expansion of the Montour WMA boundary and the habitat improvement proposals in Alternative B, it could be expected that consumptive recreation opportunities would increase in the WMA. Because the site is managed by IDFG, which receives funds provided by the purchase of hunting and fishing licenses and tags as well as excise taxes collected from hunting and fishing equipment, additional use would likely generate additional funds associated with these consumptive recreation activities. Since recreation use is projected to increase (see Section 3.7, *Recreation*) in the area and consumptive recreation opportunities would increase in the WMA, it is likely that additional funds would be generated.

Alternative B proposes evaluating existing agricultural and grazing leases located in Montour WMA for compliance with WMA goals and objectives as they become due. There is one agricultural lease and two grazing/agricultural leases on lands within Montour WMA. These leases require an extension each year and are renewable for only four years after the original year of the lease. If the leases were to be discontinued, there could be a minor adverse impact to the leaseholders who would lose lands used to produce income.

As stated previously, even though Alternative B proposes a greater degree of improvements and programs, it is difficult to accurately project a correlation between the two alternatives and any substantial differences in local economics.

Mitigation and Residual Impacts (Alternative B)

No mitigation measures are proposed since Alternative B is not expected to directly affect local population or income to a substantial degree. No significant residual impacts related to socioeconomics are identified for Alternative B.

3.10 Environmental Justice

3.10.1 Affected Environment

Executive Order 12898 (Environmental Justice, 59 Fed. Reg. 7629 [1994]) requires each Federal agency to achieve environmental justice by addressing "disproportionately high and adverse human health and environmental effects on minority and low-income populations." The demographics of the affected area are examined to determine whether minority populations, low income populations, or Indian Tribes are present in the area impacted by a proposed action. If so, a determination must be made as to whether the implementation/development of the proposed project may cause disproportionately high and adverse human health or environmental effects on the minority or low income populations present. Examination of minority and low income populations is warranted through the adoption of a 1994 directive designed specifically to examine impacts to such things as human health of minority populations, low income populations, and Indian Tribes and is commonly known as Environmental Justice.

The Council on Environmental Quality (CEQ) defines "minority" to consist of the following groups: Black/African American, Asian, Native Hawaiian or Other Pacific Islander, American Indian or Alaskan Native, and Hispanic populations (regardless of race). Additionally, for the purposes of this analysis, "minority' also includes all other non-white racial categories within the 2000 Census such as "some other race" and "two or more races." The Interagency Federal Working Group on Environmental Justice (IWG) guidance states that a "minority population" may be present in an area if the minority population percentage in the area of interest is "meaningfully greater" than the minority population in the general population. CEQ also defined "low income populations" based on the annual statistical thresholds from the Bureau of the Census. These "poverty thresholds" are calculated by family size and composition and are updated annually to reflect inflation. A population is considered low income if the percentage of the population that is below the poverty threshold within the area of interest is "meaningfully greater" than the low income population in the general area (state-wide) population.

The resource management planning and NEPA environmental review process for the Black Canyon Reservoir RMP complies with Executive Order 12898 by identifying minority and low income populations early in the process and incorporating the perspectives of these populations into the decision-making process.

Nearly 94 percent of the population of Gem County is white; thus, the potentially affected minority population in this region includes African American (0.1 percent), Indian/Alaska Natives (0.7 percent), Native Hawaiian and other Pacific Islanders (0.1 percent), Asians (0.4 percent), and mixed and other races (5.0 percent). Hispanics (of any race) make up about 6.9 percent of the county population. The income of approximately 13.1 percent of the county population is less than the poverty level compared to 11.8 percent for the state (U.S. Census 2000).

3.10.2 Environmental Consequences

Statistics have not been compiled on the race or ethnicity of users of Black Canyon Reservoir and Montour WMA. It would be logical to assume that the users reflect the makeup of the population of Gem County and nearby Ada (which includes the Boise metropolitan area), Canyon, and Payette counties. Implementation of either of the two alternatives would have no effect to environmental justice concerns. Under either alternative, the campground at Montour Campground and parking access at Black Canyon Park would continue to assess nominal user fees set by Reclamation to offset maintenance costs. Additionally, current reservation fees would still be required for the gazebo or picnic shelter at Wild Rose Park, two group picnic shelters at Black Canyon Park, and a group camping area at Triangle Park. The remainder of recreation facilities at Black Canyon would be free. Triangle Park has been designated for special events in Alternative B and could likely assess fees for future events as well. In either alternative, Reclamation would continue to seek a non-federal managing partner to operate all recreation facilities. If a managing partner is found, it is possible that they could assess nominal fees for use of areas that are currently free or increase fees at those locations that currently assess them. While no minority group would be disproportionately affected, in general, lower income families or individuals would be affected by fees to a greater extent than middle or upper income groups.

3.10.2.1 Mitigation and Residual Impacts

No mitigation measures are proposed for either of the two alternatives because no impacts would occur to environmental justice concerns from their implementation. Residual impacts are discussed in the preceding narrative.

3.11 Cultural Resources

3.11.1 Affected Environment

Evidence of human occupation in southwestern Idaho dates to as early as 10,000 years before the present (B.P.). Artifact comparisons with other areas in the region suggest a sequence of prehistoric use of the Montour Valley area from at least 6,000 B.P. to approximately 700 years ago. Over time, there was a gradual shift from the hunting of large fauna toward increased utilization of a diversity of plant and animal resources, reflected in greater variability of tool technologies and site types (Gibson and Kaberline 2002).

The RMP Study Area is located near the boundaries of the Great Basin and Columbia Plateau culture areas. The ethnographic record suggests that two groups, the Northern Paiute and the Northern Shoshone, both speakers of the Numic language, shared resources and range in the vicinity of the RMP Study Area along the Payette River. These groups also shared similar material cultures, socio-political organization, and religious practices. Both the Northern Paiute and the Northern Shoshone followed subsistence-settlement patterns based on small bands of hunters and gatherers living in small transitory camps and exploiting a broad array of resources. Larger groups who wintered in valleys would disperse during the summer to exploit a multitude of resources (Morgan 1999).

In addition to being blessed with a moderate climate and an abundance of large and small game animals, the Montour Valley would have appealed to prehistoric groups in other ways. One attraction would have been easy access to fresh water mussels and salmon. Prior to white settlement, Montour served as an important Indian fishery, with the Montour Valley participating in a major regional Indian trading fair/cultural exchange each summer during salmon season. Another attractive feature of the valley would have been proximity to Timber Buttes. Timber Buttes, a known obsidian quarry approximately10 miles north of the Montour Valley, served as an important lithic source for stone tool manufacture for prehistoric inhabitants of the region for thousands of years (Morgan 1999).

Historically, Euro-American fur trapping and trading were well in place in the Payette River Valley (including the Montour Valley) by the second decade of the 1800's. By the 1830's fur resources in the region were depleted and considered "trapped out." Gold was discovered in the Boise Basin in 1862, with the Payette River serving as a main travel route to the goldfields, taking goldseekers south of Regan Butte, directly west of Montour. In the early 1860's a stage stop was established in the western end of Montour Valley, with four stagecoaches a week traveling up the Payette River through Montour. This stage station became a post office in 1870, and eventually took on stock raising and other functions, becoming known as the Mitchell, Marsh, and Ireton ranch. Prior to 1900 about 50 people lived in and around the valley, relying mostly on logging, mining, ranching, and farming as a way of life. Rail service reached Montour in 1910 (Idaho Northern Railroad), extending through Black Canyon from Emmett to Horseshoe Bend and McCall. In 1911 the town of Montour was platted, and the entire town was built between 1912 and 1915. The town effectively ceased to grow after about the mid-1920's, with ensuing years bringing depression and bankruptcy to the small community (Gibson and Kaberline 2002, Morgan 1999, and Briggs, No Date).

The rural, small town character of Montour remained virtually unchanged between the late 1920's and the early 1980's. In 1924, Reclamation constructed Black Canyon Dam to divert irrigation water to crops and orchards in the Emmett Valley, and for power generation. Increased stream flow and sediment buildup within the Black Canyon Reservoir resulted in higher annual water table and annual flooding in the Montour Valley. Subsequent loss of crops and property damage resulted in years of litigation by the local population. In the 1970's, Reclamation acquired the land within the 100-year floodplain to insure continued project operations of Black Canyon Dam. Following documentation of the Montour Historical District, the Marsh-Ireton Ranch and other businesses, farms, and buildings were purchased and razed. Many long-time Montour residents moved away from the Valley (Morgan 1999).

A total of 52 cultural resource sites (including isolates) have been documented within the boundaries of the Black Canyon/Montour RMP Study Area. The inventory includes 40 archaeological sites, 12 historic structures or features, and one potential historic district, which includes several standing structures and the foundation remains of approximately 30 other structures. Most of these sites have been previously recorded on site records filed at the Idaho State Historic Preservation Office (SHPO) (Gibson and Kaberline 2002, and Morgan 1999).

Most of the archaeological sites are deposits of prehistoric artifacts or flakes, usually obsidian, basalt, or cryptocrystalline silicate (chert, jasper, or chalcedony) produced in tool manufacture. Sites display a range of features and materials, including hearths, diagnostic side and corner notched projectile points, ground stone objects (grinding stones and pestles), cobble choppers, animal bone, and fire-altered rock. Several sites were recognized as dense deposits of mussel shells, reflecting prehistoric exploitation of fresh water mussels. One stratified site (10-GM-61) contains the rare remains of a semisubterranean house pit within its deposits. Prehistoric sites appear to be residential camps, where tools were manufactured, and where exploitation of fresh water mussels and procurement of other food sources was a major focus.

Historic documentation in the RMP Study Area attests to a wide variety of historic site types. These include resources related to transportation (roads, bridges, the railroad); irrigation (dams, canals, and associated structures); and residential/farming/ranching activities (townsite, refuse scatters, buildings, equipment, foundations).

A survey to identify properties of traditional cultural importance to Indian tribes (and sacred sites) has not been undertaken for the RMP Study Area because of the sensitivity of disclosing the location of such places. The Montour Valley contains streams, valleys, draws and other natural features that could have served as traditional resource procurement areas for aboriginal peoples in their search for food, medicine, clothing, and other necessities, and might qualify as "traditional cultural properties." Also, portions of the Valley may have historically served as ritual or ceremonial places, or as locations associated with traditional beliefs and practices; as such, they could constitute places of traditional cultural importance to the Shoshone-Paiute, Shoshone-Bannock, and possibly other tribes, and thus might qualify as "traditional cultural properties."

Although the RMP Study Area has been explored for cultural resources since the mid-1970's, a good portion of the RMP Study Area has not been intensively surveyed on the ground. Of the cultural resource sites known for the RMP Study Area, the following are considered eligible for

the National Register of Historic Places (although more than half of the known archaeological sites have not been evaluated for eligibility to the National Register):

- 10-GM-61 (stratified prehistoric camp site with pithouse)
- 45-1989 (Montour Historic District)
- 45-18109 (Black Canyon Dam)
- 45-1416 (Marsh-Ireton Ranch)
- BS-1819 (prehistoric lithic scatter)
- BS-1824 (prehistoric lithic scatter)

These sites (as well as other sites that remain to be identified and evaluated for the National Register) have the potential to address research questions or to offer vital information relating to prehistoric and historic use of the RMP Study Area. For example, questions of chronology, prehistoric settlement patterns, natural resource use, and prehistoric affiliations/trade could be answered by future archaeological investigations in the Montour Valley. Because it has a combination of floodplain and bench sites, some of which have great antiquity, the Montour Valley is potentially an extremely important context for study of variability and change in prehistoric settlement and subsistence patterns.

3.11.2 Environmental Consequences

There is a greater potential for beneficial effects to cultural resources from Alternative B than from Alternative A. Reclamation legally must take into account the effects of its actions upon cultural properties under Alternative A and B. However, Alternative B provides greater opportunity for "proactive" cultural resource management through increased public awareness and historic designations, not provided under Alternative A. Alternative B does not rely on reactions to Reclamation undertakings to trigger protection of cultural resources.

3.11.2.1 Alternative A (No Action Alternative)—Continuation of Existing Management Practices

Because a good portion of the RMP study area has not been intensively surveyed for cultural resources, the discussion of environmental consequences is necessarily general. Identification, protection, and management of cultural resources would continue to occur on a project-specific basis, in response to individual Reclamation-initiated or Reclamation sponsored undertakings that pose a threat to cultural resources. The cultural resources management mode would continue to be predominantly one of reacting, instead of initiating protection from within the cultural resources program itself (that is, a proactive approach). Significant cultural sites would be protected because of legal requirements to do so, not through any agency initiative or preference.

Under existing management, exposed archaeological deposits, in general, would continue to be degraded by erosive forces within and away from the reservoir pool, by vandalism and relic collecting, and by Reclamation-sponsored or initiated actions within the RMP Study Area. The net effect of these actions upon cultural resource sites would be to disturb the horizontal and vertical context of artifacts and other cultural materials, thus destroying scientifically and culturally valuable depositional data about the site, and ultimately information about the early peoples whose activities created the site. These effects tend to be cumulative, annually affecting

the integrity of the cultural property and its potential eligibility to the National Register of Historic Places.

Under Alternative A, management of the WMA, reservoir, and adjacent lands would be on an ad hoc basis, without benefit of a management plan. Several classes of activities routinely conducted under Alternative A around Black Canyon Reservoir and Montour have the potential to adversely affect cultural resources because of their informal, unstructured approach, which traditionally may not consider effects to other natural or cultural resources. These activities include: lack of an effective erosion control program, minimal public information activities, absence of specific procedures for special events, lack of formalized access procedures, and lack of an overall plan for wetland development. Direct impacts to archaeological and other cultural sites from these activities can result in artifact compaction, dispersal, or removal, leading to destruction of the horizontal and vertical context of the site, and to loss of potential for providing scientific information about the site. Based on the existing cultural resource knowledge base, direct impacts would have greater potential for damage to archaeological sites in the Montour Valley than other locations in the RMP area.

Mitigation and Residual Impacts (Alternative A)

Mitigation for adverse effects from actions occurring under Alternative A would be conducted in accordance with procedures specified in the 36 CFR 800 regulations. Under these procedures, mitigating actions would be developed in consultation with the Idaho SHPO and interested Indian tribes.

3.11.2.2 Alternative B (Preferred Alternative)—Enhancement of Natural and Cultural Resource Values and Maintenance of Recreational Opportunities

Possible erosional impacts from reservoir operations and natural forces, as well as adverse effects from relic collecting, would continue under this alternative. However, because actions prescribed under Alternative B are more focused, developed, and tend to confine activities to smaller areas, Alternative B would be more beneficial to cultural resources than Alternative A.

Under Alternative B, the Preferred Alternative, an effort would be made to proactively manage cultural resources in the Montour Valley. Recognizing the old Montour town site as an historic district and eventually nominating it to the National Register would provide the historic district with a legal measure of protection, which future Reclamation actions would have to take into account. In addition, areas of focused interpretation and public awareness in the Montour Valley (for example, at Marsh/Ireton Ranch, the Palmer House, or historic district) would increase respect and stewardship for these resources and the need to protect them, at the same time confining visitors to controlled spaces, decreasing opportunities for relic collection and vandalism.

Under Alternative B, an effort would be made to actively manage resources other than cultural resources, which would provide indirect benefits to cultural resources. Improving habitat quality through grazing management in the entire RMP Study Area should greatly diminish the potential for cattle to trample cultural sites, thereby destroying their context and rendering them vulnerable to erosion. Effective erosion control programs throughout the RMP Study Area would reduce an obvious harmful threat to archaeological sites. Designating Triangle Park as the main location to

hold special events, while not allowing special events at Montour WMA, would confine large groups to areas where there is less potential to impact cultural properties. Alternative B Actions related to access at Montour WMA would generally have beneficial effects on cultural resources by channeling or confining visitors to areas where they can be controlled and monitored through use of larger signed parking areas, by barriers to regulate motorized access, and by development of self-guided tours.

Not all actions anticipated under the preferred alternative would benefit cultural resources and some actions might threaten cultural resources more than Alternative A actions. Nevertheless, taken as a whole, the actions proposed under Alternative B are generally more beneficial to cultural resources than Alternative A actions.

Public education and interpretation programs under Alternative B would increase awareness, but at the same time, intentionally or inadvertently, attract greater numbers of people to a specific location, thus increasing the potential for looting and vandalism. Improved access at the reservoir and WMA through non-motorized trail connections and WMA trail access are preferred alternative actions which can open up new areas to surface modification and public use, causing direct and indirect disturbances to cultural sites. Developing and implementing a program for additional wetland pond acreage has high potential for disturbing the context and intact cultural deposits of archaeological sites in the Montour WMA, mainly through use of heavy dirt-moving equipment. However, because only 25 to 50 pond acres are prescribed under Alternative B, this alternative poses less of a threat to cultural resources through pond development than does Alternative A, in which there is no restricted acreage. Expanding facilities at Cobblestone Park and Black Canyon Park to accommodate additional day use can directly and indirectly impact cultural sites by attracting larger numbers of visitors to the facilities (in this respect Alternative B poses more of a threat to cultural resources than does Alternative A). There is a direct correlation between the number of visitors to an area and impacts on cultural resource sites.

Mitigation and Residual Impacts (Alternative B)

Mitigation under Alternative B (or Alternative A) would occur if cultural resources are present that are eligible for the National Register, and if they are being adversely impacted by reservoir operations or land uses or are being damaged by natural agents. If an action is planned that could adversely impact an archaeological, traditional, or historic resource, Reclamation will investigate options to avoid the site. Cultural resource management actions for impacted sites will be planned and implemented in accordance with consultation requirements defined in 36 CFR 800, using methods consistent with the Secretary of the Interior's Standards and Guidelines, or for the Native American Graves Protection and Repatriation Act, for remains or items that fall under the purview of that statute.

3.12 Sacred Sites

3.12.1 Affected Environment

Sacred sites are defined in Executive Order 13007 as "any specific, discrete, narrowly delineated location on Federal land that is identified by an Indian Tribe, or an Indian individual determined to be an appropriately authoritative representative of an Indian religion, as sacred by virtue of its established religious significance to, or ceremonial use by, an Indian religion..." Under Executive Order 13007, Federal land managing agencies must accommodate access to and ceremonial use of Indian sacred sites by Indian religious practitioners, and avoid adversely affecting the physical integrity of such sacred sites.

There are various natural features and locations on the RMP Study Area landscape that would have held spiritual or religious significance to aboriginal tribes. These features and locations might require special attention by Reclamation in future administration of the project area. The properties might include altars, vision quest sites, burial sites, and river and rock geographic features, among others. Regan Butte, a prominent geographic feature overlooking the Montour Valley, has a unique characteristic: a large hole in the vertical basalt columns near the peak affords a view through the rock from great distances. This anomaly is especially striking when the sun angle is low and appears to pierce the basalt columns. This feature may have been the location of many sacred or ceremonial activities. Modern lore, in fact, points to the butte as an ancient burial location. Local residents recall collecting trade beads and other artifacts many years ago from the top of Regan Butte. Recent offerings of porcupine quills and other objects attest to the continuing spiritual nature and use of this prominent feature (Morgan 1999).

3.12.2 Environmental Consequences

3.12.2.1 Alternative A (No Action Alternative—Continuation of Existing Management Practices

Possible impacts to Indian sacred sites from a continuation of existing management practices in the area of the RMP (or from new management practices or activities) can only be dealt with in a general way since the specific nature and location of sacred properties is unknown. If sacred sites are located in the area of potential effect of a Reclamation project, their integrity is compromised by actual physical disturbances as well as visual or auditory intrusions resulting in changes in character, feeling, and association of the site. In such cases, their "sacredness" and importance as a religious or sacred site is diminished. As with cultural resources, sacred sites are compromised by vandalism and relic collecting, by land use activities, and recreation and other development.

Mitigation and Residual Impacts (Alternative A)

Executive Order 13007 does not authorize agencies to mitigate for the impact of their actions upon Indian sacred sites. However, it does direct them to avoid adverse impacts whenever possible. For future Reclamation actions in the RMP area that could impact Indian sacred sites, Reclamation would consult with tribes in conjunction with any 36 CFR 800 consultations. Under these consultations, Reclamation will seek means to avoid adverse impacts to sacred sites.

3.12.2.2 Alternative B (Preferred Alternative)—Enhancement of Natural and Cultural Resource Values and Maintenance of Recreational Opportunities

This alternative is essentially the same as Alternative A. However, because of more focused, controlled, and formalized land use activities, potential impacts to sacred sites under Alternative B would be less than for Alternative A.

Mitigation and Residual Impacts (Alternative B)

Mitigation is the same as described for Alternative A above.

3.13 Indian Trust Assets

3.13.1 Affected Environment

ITAs are legal interests in property held in trust by the United States for Indian Tribes or individuals. The Secretary of the Interior, acting as the trustee, holds many assets in trust for Indian Tribes or Indian individuals. Examples of things that may be trust assets are lands, minerals, hunting and fishing rights and water rights. While most ITAs are on-reservation, they may also be found off-reservation.

The United States has an Indian trust responsibility to protect and maintain rights reserved by or granted to Indian Tribes or Indian individuals by treaties, statues, and executive orders. These are sometimes further interpreted through court decisions and regulations.

The Shoshone-Bannock Tribes, a Federally recognized Tribe, located at the Fort Hall Indian Reservation in southeastern Idaho have trust assets both on-reservation and off-reservation. The Fort Bridger Treaty was signed and agreed to by the Bannock and Shoshone headman on July 3, 1868. The treaty states in Article 4, that members of the Shoshone-Bannock Tribe" …shall have the right to hunt on the unoccupied lands of the United States…."

The Tribes believe their right extends to the right to fish. The Fort Bridger Treaty for the Shoshone-Bannock has been interpreted in the case of State of Idaho v. Tinno, an off-reservation fishing case in Idaho. The Idaho Supreme Court determined that the Shoshone word for "hunt" also included to "fish." Under Tinno, the Court affirmed that the Tribal Members' right to take fish off-reservation pursuant to the Fort Bridger Treaty (Shoshone-Bannock Tribes 1994).

The Nez Perce Tribe is a Federally recognized Tribe of the Nez Perce Reservation in northern Idaho The United States and the Tribes entered into three treaties (Treaty of 1855, Treaty of 1863, and Treaty of 1868) and one agreement (Agreement of 1893). The rights of the Nez Perce Tribes include the right to hunt, gather, and graze livestock on open and unclaimed lands, and the right to fish in all usual and accustomed places (Nez Perce Tribe 1995).

The Northwestern Band of the Shoshone Indians, a Federally recognized Tribe, without a reservation possess treaty protected hunting and fishing rights which may be exercised on unoccupied lands within the area acquired by the United States pursuant to the 1868 Treaty of Fort Bridger. No opinion is expressed as to which areas maybe regarded as "unoccupied lands."

Other Federally recognized Tribes that do not have off-reservation ITAs may have cultural and religious interests in the areas being considered in the RMP. These interests may be protected under historic preservation laws and the Native American Graves Protection and Repatriation Act (NAGPRA). See sections 3.11 and 3.12 (Cultural Resources and Sacred Sites) for a discussion of other Tribal interests.

3.13.2 Environmental Consequences

There is no universally accepted understanding as to the specific treaty rights to hunt and fish in the vicinity of the Black Canyon Reservoir and the Montour WMA since there has not been a settlement with either the Nez Perce Tribe, the Shoshone-Bannock Tribes or the Northwestern Band of the Shoshone Nation as to the extent and nature of their off-reservation hunting and fishing treaty rights. Thus, ITA's considered are tribal hunting and fishing rights that may exist. Water rights claims or lack of such claims within the Snake River Basin Adjudication are not necessarily determinative of these kinds of rights.

There are no direct impacts to the right to hunt, right to fish or right to gather under either Alternative A or B. The impacts to resources associated with these rights are discussed in Section 3.4, *Wildlife*, and 3.5, *Aquatic Biology*. Hunting is discussed for each alternative under Sections 2.2.1.2 and 2.2.2.2, *Consumptive Recreation (hunting, fishing, trapping)*.

3.13.2.1 Mitigation and Residual Impacts

No mitigation measures are proposed for either of the two alternatives because no impacts would occur to tribal rights from their implementation. No residual impacts would occur as a result of either of the two alternatives.

3.14 Cumulative Impacts

Cumulative impacts are effects on the environment that result from incremental consequences of a proposed action when added to other past, present, and reasonably foreseeable future actions, regardless of who undertakes these actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time. It has been determined that the proposed Black Canyon Partners, LLC, planned unit development project noted in Section 1.6, *Related Activities*, represents a reasonably foreseeable future action that may result in cumulative impacts to various resources associated with Reclamation lands at Black Canyon Reservoir and Montour WMA. Known factors related to this project are described below. Potential cumulative impacts to reservoir and WMA resources follow this description.

The Black Canyon Partners, LLC, project is still in the early stages of development, and although some lands have been purchased, future lands still need to be acquired or leased, planning and design concepts worked out, and permits obtained. The project would encompass about 3,232 acres and occur in three separate phases. It is proposed to be developed primarily on private land adjacent to Reclamation lands on the south side of the reservoir, including a large private parcel with a flowage easement (the peninsula across from and just downstream of Triangle Park). It appears the project also proposes using portions of Reclamation lands across from and upstream of Triangle Park.

Known details of the proposed development are as follows:

- Phase 1:
  - First 18-hole golf course
  - Clubhouse, swimming pool, and tennis court
  - Restaurant
  - Depot and marina
  - Amphitheater
  - Commercial district
  - Approximately 110 residential home sites (3,200 sq. ft. to 40 acres in size)
  - Infrastructure (roads, community water/wastewater system, and utilities)
- Phase 2:
  - Equestrian facilities located at Spring Gulch, including indoor and outdoor arena, barn/stables, and commercial area (veterinarian/farrier/feed)
  - 200 to 250 residential home sites
- Phase 3:
  - Second 18-hole public golf course
  - 200 to 250 residential home sites

The proposed development includes numerous features that could potentially result in impacts to various natural, cultural, and social resources found within the RMP study area. The eastern boundary of the proposed development would abut the new western boundary of the expanded WMA. The project's northern boundary would be adjacent to the reservoir and Reclamation lands on the south side of the reservoir. Drainages running through and out of the proposed

development area and into the reservoir include one perennial creek (Anderson Creek) and several intermittent creeks. The area proposed for this development has primarily been used for livestock grazing or has remained in a fairly natural state; therefore, the development would drastically alter the area's long-term use and character.

It is important to note that if any Federal actions are triggered from the proposed development, then future specific effects on Reclamation lands and facilities would be handled under a separate NEPA analyses.

3.14.1 Cumulative Impacts Related to Resource Topics Included in the Draft EA

3.14.1.1 Water Quality and Contaminants

A development of this size would likely cause a substantial amount of land disturbance and erosion potential, adding to sediment loads in the reservoir. Increased boating activity could adversely affect shoreline habitat and increase soil erosion. The proposed golf courses and other areas with maintained landscapes (residences, commercial areas, etc.) have the potential to contribute pesticides and fertilizers into Anderson Creek, various intermittent creeks, and ultimately the reservoir. Sewage disposal, increased snowmelt, and increased stormwater runoff have the potential to increase nutrient loading to the reservoir.

3.14.1.2 Vegetation

Development of the project would likely result in the loss of native plant communities in the project area and would increase shoreline erosion and loss of shoreline plant communities, as a result of more boats on the reservoir.

3.14.1.3 Wildlife

The project would likely result in the loss of wildlife habitat in the project area as the development proceeds and would increase shoreline erosion and loss of shoreline plant communities, as a result of more boats on the reservoir. Wildlife in the WMA could be affected because of its proximity with the project and presence of more people in the area.

3.14.1.4 Aquatic Biology

Potential cumulative effects resulting from the proposed project include increased anglers on the reservoir, land disturbance, associated water quality issues, and possible flow reductions in tributaries.

3.14.1.5 Threatened and Endangered Species

The proposed project could potentially affect Ute ladies' tresses orchids that may occur in or near the RMP Study Area. Typical potential habitat includes wetland and riparian areas such as springs, wet meadows, and river meanders. Impacts to Ute ladies' tresses could include surface disturbance and hydrologic changes in areas where suitable habitat is located.

Bald eagles use the RMP Study Area mainly during the winter months. An increase in the year-round human population as a result of the proposed project could potentially affect eagle use in the area.

Although the likelihood of a gray wolf occurring within the RMP Study Area is low, it is still possible. The greatest chance of an occurrence is during a severe winter when more than a normal number of deer, the wolf's primary potential prey in the RMP Study Area, would be driven to lower elevations by deep mountain and foothills snow. An increase in the local human population of the area around the RMP Study Area from the proposed project would result in more traffic and consequently more vehicle deer collisions, especially during severe winters. The availability of more dead deer near the highway for scavenging wolves could result in a slightly higher potential for vehicle wolf collisions, although this is considered to be only a remote possibility because of the location of the project.

The proposed project would not affect Squaw Creek; therefore, there would be no cumulative impacts to bull trout.

3.14.1.6 Recreation and Access

Construction of the proposed planned unit development would dramatically and permanently change the type and level of recreation activity in the area. A major impact would be the creation of an entirely new recreation activity in the area (golfing), and new visitors and residents that would be drawn to the area to participate in this activity. Additionally, the proposed development would be expected to attract many visitors and local residents in the summer when most reservoir visitors currently use the area. This would create some adverse impacts such as increased crowding and potential conflicts on the reservoir because of increased boating activities, and to a lesser degree, increased competition for space at the reservoir recreation sites. Increased use, competition, and conflicts would likely alter the reservoir visitor's experience and may cause visitors to go elsewhere. Conversely, the project would also create new recreational opportunities that don't currently exist. In summary, the proposed project would have both an adverse and a positive impact on recreation in the area. While it would create the positive impact of providing new recreational activities and visitor experiences, it would potentially displace existing visitors, as well as the character of the recreational experience currently available in the area.

It is likely that a development of this scale would substantially increase traffic in the area, particularly on the south side of the reservoir where the development is being proposed. While the cumulative effect would be more traffic in the general area, it would be expected to have only a marginal affect on reservoir users due to the reservoir recreation sites all being located on the north side of the reservoir off Highway 52. However, short-term effects to access (including traffic-related problems) would be greater to the entire area as a result of construction-related activities and the larger number of vehicles and using area roads.

3.14.1.7 Land Use

Overall, the proposed project would alter land use patterns, result in changed zoning, increase overall activity levels, and modified property values throughout the surrounding area. This, in turn, could spur more growth and even greater cumulative impacts on area resources. The project

would put increased pressure on, and thus cumulatively affect, area providers of public services and utilities, such as law enforcement, emergency services, and power, water, and waste service.

The project also proposes using some of Reclamation's land in their development. If this is the case, Black Canyon Partners, LLC, would need to obtain a permit from Reclamation in order to use Reclamation land. Should Reclamation choose to issue the permit, it would obligate some Reclamation land for a different use than currently exists, and could result in exclusive uses where the general public would no longer be assured access.

Any development proposed within the area encumbered by Reclamation's flowage easement would still be subject to reservoir flowage if necessary; therefore, no cumulative effects would be anticipated in this area.

3.14.1.8 Socioeconomics

Construction of a phased project of this magnitude would substantially and permanently change the type and level of human activity in the area. This would likely result a adding a relatively large number of job opportunities, particularly in the short-term during construction, but also in the long-term with the addition of primarily service-oriented jobs. Thus, the cumulative effects on socioeconomic resources would generally be positive.

3.14.1.9 Environmental Justice

No cumulative impacts to environmental justice would be anticipated as a result of the proposed development project.

3.14.1.10 Cultural Resources

The proposed Black Canyon Partners, LLC, development project would have both direct and indirect impacts upon cultural resources. Construction and development of Phase 1 activities would involve large areas of surface disturbance that can directly damage intact cultural deposits, break artifacts, and mix together artifacts from different episodes of occupation thus destroying context. Associated road or trail construction would increase surface erosion, destabilizing the soil base and damaging fragile archaeological sites. The planned use of the area for commercial, residential, and recreational purposes would radically alter the population base of a heretofore sparsely-populated area, greatly increasing the potential for archaeological site looting, relic collecting, and vandalism. Both the direct and indirect impacts of the Black Canyon Partners, LLC, development to cultural resources would intensify and expand in area with subsequent Phases 2 and 3, through increased surface disturbance and greater numbers of residents and recreational activities.

3.14.1.11 Sacred Sites

Should any Indian sacred sites such as burials happen to be present, construction and development can adversely affect such sites by disturbing or destroying their physical and spiritual context. Any activities that result in an increase of visitors and residents to an area is likely to adversely impact sacred sites—directly, by causing a physical change in the character of the site, and indirectly, by introducing intrusive elements such as noise, increased looting, and changes in viewshed and setting. A greater chance for those impacts occurring would result from

subsequent Phases 2 and 3 of the Black Canyon Partners, LLC, development and associated increased use of the area.

3.14.1.12 Indian Trust Assets

Indian Trust Assets, or the right to hunt, fish, or gather that may exist, apply to Federal lands. The proposed development would not impact tribal rights that may exist, but could affect resources associated with the rights, the vegetation, wildlife and aquatic habitat on the federal lands. Discussions for Vegetation, Wildlife, and Aquatic Biology are noted in the narrative above, *3.14 Cumulative Impacts*.

3.14.2 Other Potential Cumulative Impacts

Noise-related impacts and effects on visual resources and air quality were not described nor impacts assessed in the Draft EA because it was determined that the alternatives would not affect these resources. However, the proposed project would likely affect these resources, thus, summaries of the probable effects to these resources is provided below.

3.14.2.1 Air Quality

Cumulative effects on air quality would be increased levels of airborne dust and would be associated primarily with construction-related activities, and therefore, relatively short-term. Nonetheless, because of the level of development being proposed and the phased nature of the project, these impacts could be drawn out over a fairly lengthy timeframe.

3.14.2.2 Visual Resources

As previously noted, construction of the proposed planned unit development would dramatically and permanently change the type and level of activities in and character of the area resulting in an adverse impact on the visual resources on the RMP Study Area. The dominant visual quality of the area, including where the proposed project would be located is, for the most part, unencumbered by buildings, roads, and other human-induced impacts (golf course and marina). The project would completely change the character of the south side of the reservoir from pastoral and rural to one that has a more suburban character.

3.14.2.3 Noise

Cumulative effects to noise levels in the area would be increased levels associated primarily with construction-related activities, and therefore, relatively short-term. Nonetheless, because of the level of development being proposed and the phased nature of the project, these impacts could be drawn out over a fairly lengthy timeframe. Additionally, increased boating on the reservoir would cause an incremental increase in the overall noise effects caused by this activity.